

## ABSTRACT

Title of the Dissertation: ON FORMAL FEATURE LICENSING IN MINIMALISM:  
ASPECTS OF STANDARD ARABIC MORPHOSYNTAX

Usama Soltan, Doctor of Philosophy, 2007

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This dissertation investigates a set of phenomena in Standard Arabic at the syntax-morphology interface, providing an analysis for each within the assumptions of the minimalist program, particularly those related to mechanisms of formal feature licensing. Among the issues discussed are the subject-verb agreement asymmetry, case-assignment, default agreement, nominative Themes, as well as interactions between tense, negation, and modality heads. In this regard, I provide an analysis for word order alternation in the language in terms of left dislocation rather than via movement, showing that the language does not show A-movement effects in SVO orders, passives, raising constructions, or object shift. The same is also shown to hold in what is usually referred to as raising-to-object constructions. The proposed analysis shows that formal features such as case and agreement can be licensed in absence of movement, a conclusion more compatible with the Agree-based approach to formal feature licensing in minimalism than with the Spec-head approach. Finally, I propose to extend Agree to head-head relations in the functional domain, accounting for the interesting, though rather intricate, paradigm of inflecting negatives as well as person-less imperatives in Standard Arabic and languages that exhibit similar behavior.

ON FORMAL FEATURE LICENSING IN MINIMALISM: ASPECTS OF  
STANDARD ARABIC MORPHOSYNTAX

By

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## Dedication

*To my parents.*

إلى أمي رحمها الله، وإلى أبي أطل الله في عمره.

## Acknowledgements

The writing of this thesis represents the culmination of my study at the linguistics graduate program at University of Maryland, College Park (UMD). During the time I spent there, I have benefited so much from the help of many people, before and during the writing of this thesis.

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I came to Maryland to do syntax, but like many others I could have changed my mind—if not for Norbert Hornstein. I'm so grateful to Norbert in many ways. Not only is Norbert a terrific teacher, but a great motivator as well. I owe him a great deal for answering my questions, reading my manuscripts, commenting on my papers and presentations, and suggesting ways to handle tough problems. Like Juan, Norbert's support for me did not wane as things got harder, and I thank him for that.

Howard Lasnik arrived at UMD halfway through my study here, and his arrival was a source of excitement for everyone. I benefited tremendously from Howard's classes, his outstanding ability to explain complex materials in such a lucid manner, and the one-on-one discussions with him in his office. His knowledge of the field is

amazingly extensive, and during my stay at UMD he has helped direct my attention to things that would otherwise skip my notice, and dig out references that, if not for him, I would not have known about. I also took advantage of his generosity and borrowed a few books and journals from his library every now and then. I am so much grateful to him for all his help and guidance.

I feel very fortunate for having the opportunity to meet Cedric Boeckx. His classes were always intellectually stimulating and challenging. His up-to-date knowledge of “things syntactic” has always been helpful to draw my attention to more recent developments in the field. I would also like to extend my thanks to him for accepting to be on my defense committee. His questions and comments have definitely helped me understand things better.

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I would also like to take the chance here and thank the Department of Linguistics at UMD for funding my study at the graduate program for five years. If not for that, I would not have been able to do this. Thanks are also due to the English Department at the Faculty of Al-Asun, Ain Shams University in Cairo for giving me a leave of absence to finish my Ph.D here.

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While at the linguistics department at UMD, I also got to know so many wonderful people in the TA lounge. I consider myself very lucky to have met Pritha Chandra, Lydia Grebenyova, Youngmi Jeong, Hajime Ono, Ivan Ortega-Santos, Leticia Pablos, and Heather Taylor. Close by in the CNL and acquisition labs were Robert Fiorentino Takuya Goro, Utako Minai, Lisa Pearl, and Masaya Yoshida. In my final two years, it was a pleasure to sit in seminars with Asad Sayyed.

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My father has strived all his life to make life better for his family. I'm deeply indebted to him, not just for raising me, but for being such a great example of dignity and integrity. I also thank him for instilling in me the love of Arabic grammar from an early age. If not for him, I probably would not be doing linguistics today. This work is dedicated to him. May Allah always bless him with good health and happiness!

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While this work has benefited from the help and support of all those people and others, it goes without saying, however, that I remain solely responsible for any shortcomings or errors herein.

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*Usama Soltan*

*August 25<sup>th</sup>, 2007*

*Washington, DC*

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## List of abbreviations used in glosses of data

1, 2, and 3 = first, second, and third person

mas = masculine

fem = feminine

sg = singular

du = dual

pl = plural

NOM = nominative

ACC = accusative

GEN = genitive

DAT = dative

SUB = subjunctive

JUS = jussive

PERF = perfective

IMPERF = imperfective

PCL = Particle (typically for modality, including futurity, markers)

C = complementizer

SUBJ = subject

OBJ = object

IMP = imperative

Neg = negation particle

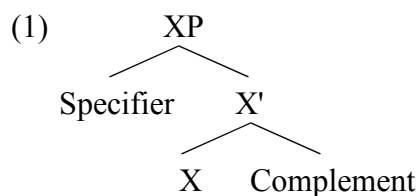
Inf = infinitive

## Chapter 1

### On the mechanisms of formal feature licensing and the design of a minimalist grammar

#### 1.1 Introduction: Formal feature licensing in generative syntax

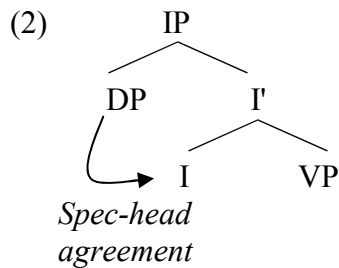
The study of formal features such as person and number agreement (typically referred to as  $\phi$ -features) on verbs and Case markings on nominals in natural language grammar has gained considerable significance in the past twenty-five years or so within generative syntax. Within the *Principles and Parameters* framework for linguistic theory, formal features have come to play a more prominent role in our analysis of syntactic phenomena. Central to this research project has always been the question of what built-in mechanism in the grammar is needed to account for agreement in natural languages. In the Government-Binding (GB) literature (see, for example, Chomsky 1981, 1982), formal features were assumed to get licensed in certain phrase structure configurations, defined in terms of X'-Theory, which took the internal structure of phrases to be as in (1):



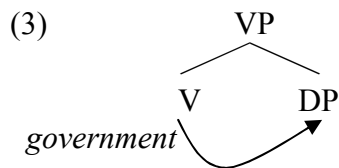
The two primitive relations in (1), Spec-head and head-complement, emerged as the configurations for licensing agreement features on verbs and case features on nominals. The first relation was typically dubbed “*Spec-head agreement*,” while the relation between a head and its complement made use of the notion of *government*, a pervasive notion in almost every module of a GB grammar. It was crucial, however,

to define government in such a way as to include both the Spec-head and the head-complement relations.

Under this approach, subject-verb agreement and nominative case assignment result from a Spec-head relation between I(nflection) and a D(eterminer) P(hrase) in its Spec:



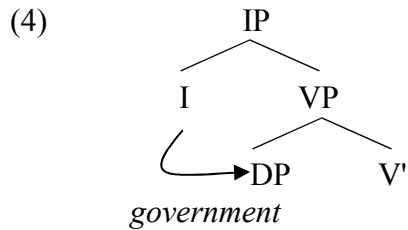
Object-verb agreement and accusative case-assignment, on the other hand, were assumed to follow directly from the government relation between a verb and its DP complement:



Further cross-linguistic investigation of agreement and case assignment showed that an extended notion of government is needed to account for subject-verb agreement in VSO languages, as has been argued to be the case in Welsh (Sproat 1985) and Standard Arabic (Mohammad 1990), for example:<sup>1</sup>

---

<sup>1</sup> The same proposal was made in Raposo and Uriagereka (1990) in their paper on long-distance case assignment, as well as in Uriagereka (1988). These works argued for a notion of government akin to what is referred to as *Agree* today. See below for a discussion of *Agree*.



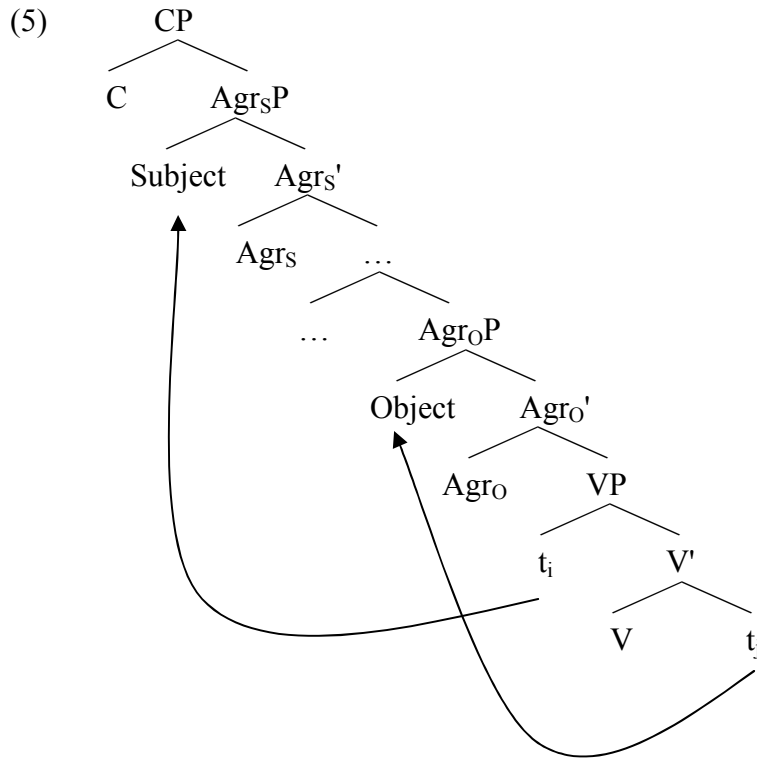
As shown in the diagram in (4), in VSO languages, I is assumed to be able to govern the DP subject in SpecVP, hence accounting for agreement on the verb as well as nominative case assignment on the DP. Of course, the (already complex) definition of government had to be complicated further to accommodate these cases, allowing a head to agree and assign Case to the Specifier of its complement.

There were thus at least three configurations for case-assignment and agreement to obtain: (a) Spec-head, (b) head-complement and (c) head-Spec-of-complement, all were somehow unified by utilizing the notion of government.

With the advent of the *Minimalist Program* (MP) for linguistic theory in Chomsky (1993), an attempt was made to get rid of the asymmetry in the configurations needed to account for agreement and Case assignment within the same language as well as cross-linguistically. In particular, Chomsky (1993) proposes a Spec-head approach to all of agreement and case-assignment phenomena, calling for the elimination of the then increasingly complex notion of government from the theory of grammar. Within the context of an enriched phrase structure theory, sparked by Pollock's (1989) Split INFL hypothesis, subject-verb agreement and nominative case assignment were assumed to be a reflex of a Spec-head relation between the subject and an Agr<sub>S</sub> (for Agr<sub>SUBJECT</sub>) head, while object-verb agreement and



accusative case were assumed to obtain in a Spec-head relation between the object and an Agr<sub>O</sub> (for Agr<sub>OBJECT</sub>) head, as shown in (5):

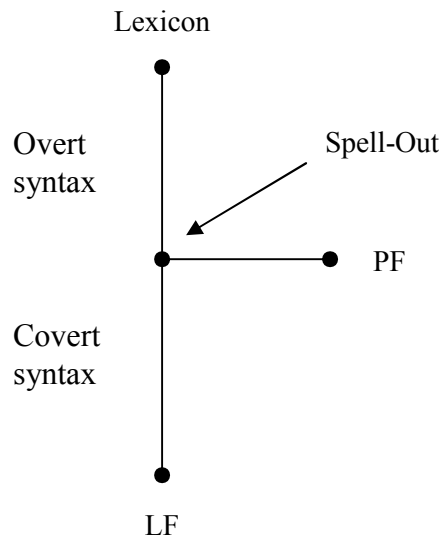


Other forms of agreement can also be captured in a Spec-head relation between a DP and an Agr head of some kind, e.g., Agr<sub>A</sub> for adjectival agreement or Agr<sub>IO</sub> for agreement with an indirect object in double object constructions.

While this uniform approach to agreement/Case-assignment eliminated the asymmetry in the manner in which formal features are licensed in the grammar, it faced a serious challenge as to how to establish the required Spec-head relations, while making sure that the correct word order of subject, verb, and object, appears at surface structure. For example, for a language like English, while subject movement to Agr<sub>S</sub>P in the tree in (5) will place the subject before the verb, as desired, object movement to Spec Agr<sub>O</sub>P will incorrectly predict an SOV order for English, under the

assumption that verbs in English do not raise to inflectional heads I/Agr<sub>s</sub>/Agr<sub>O</sub>, (though see Koizumi 1995 and Lasnik 1999, 2001, for an argument that overt object raising may actually take place in English, at least optionally according to the latter author, coupled with verb raising to an intermediate head between I and Agr<sub>O</sub>). To solve the problem, Chomsky proposed a two-cycle syntax: an overt cycle, whose operations feed Phonetic Form (PF), and a covert cycle, which allows syntactic operations to continue in the mapping to Logical Form (LF), i.e., after the branching to PF takes place.<sup>2</sup> This grammar model is shown in (6):

(6)



Under this approach, licensing of formal features can take place either in overt or covert syntax, depending on a further abstract notion of “strength” or “weakness” of features. Strong features have to be licensed overtly, or the derivation would crash at the interface. Weak features, by contrast, do not need to be licensed overtly (hence,

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<sup>2</sup> The existence of two cycles in syntactic derivations has been assumed since the early days of the T-model in the late 1970s as the Government-Binding framework was being formulated. The MP, as proposed in Chomsky (1993) made an extensive use of the distinction between the two cycles to account for a wider range of syntactic phenomena, including case-assignment and agreement.

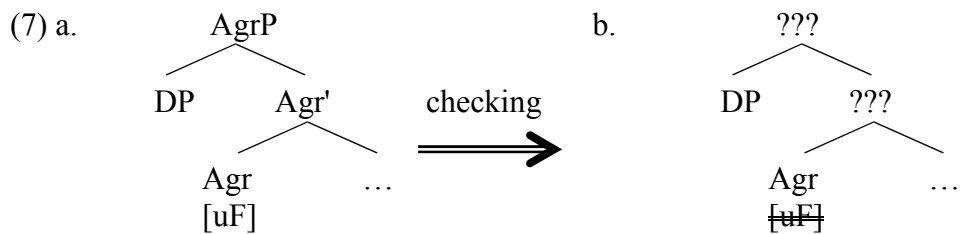
by economy, must wait till the covert cycle).<sup>3</sup> To give an example, subjects in English have to raise overtly to SpecAgr<sub>S</sub>P, because Agr<sub>S</sub> has strong features in English. Objects, by contrast, raise to SpecAgr<sub>O</sub>P only in covert syntax, since Agr<sub>O</sub> features are assumed to be weak. This will ensure that at PF the SVO order of English will surface, even though the licensing of formal features of the object happens covertly. But having two cycles and invoking feature strength was not enough. We also needed to explain how elements that are covertly licensed at LF appear with their features at PF prior to that covert licensing. As a concrete example, how is it that objects in English appear at PF with accusative case, if this case feature on them is licensed covertly? To explain that, a further modification in the design of the lexicon was needed: Lexical items have to be inserted fully inflected.

Meanwhile, cross-linguistic variation with regard to licensing formal features has been assumed to follow from parametric differences between languages as to where checking of these features takes place: overtly or covertly, depending on the “strength” or “weakness” of such features in particular languages. For example, as we have already mentioned, checking of subject-verb agreement in SVO languages like English takes place in overt syntax, before the operation *Spell-out* applies, whereas in VSO languages checking of subject-verb agreement features takes place covertly, thereby accounting for the postverbal positioning of subject in these languages. There is thus no need to invoke the notion of government for VSO languages.

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<sup>3</sup> The relevant economy condition here is called *Procrastinate* in Chomsky (1993), which states that checking of features must be procrastinated to the covert cycle when possible. Since weak features do not cause the derivation to crash in the overt cycle, then they must be checked only in the covert cycle.

It seems then that the MP, while trying to eliminate the need for both Spec-head and government in the account for agreement and Case, arguably ended up inducing more complexity in the theory than what it set out to eliminate. In addition, the introduction of Agr heads soon enough became minimalistically suspect. Agr was defined as a mere set of uninterpretable  $\phi$ -features that needed checking during the derivation to enable the derivation to converge at LF. But checking in this theory was defined as “deletion” of the uninterpretable features on a head, so these features become invisible at the semantic interface. Consider the following diagram where [uF] stands for the uninterpretable features on an Agr head, say  $\phi$ -features:

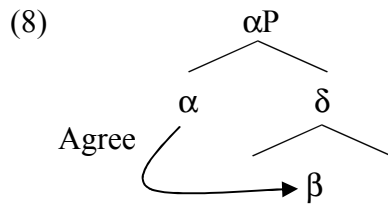


Now after the checking of the [uF] of Agr in (7a), it is not clear what AgrP is a projection of in (7b), given that Agr heads have no semantic content (Chomsky 1995, 2000). But if this is the case, then the structural representation at LF will contain an ill-formed syntactic object: After checking, AgrP is now a projection of “nothing.” That should be enough to cause the derivation to crash at LF.

Notice also that the Spec-head approach treats movement as an integral part of formal feature licensing, whether the movement is overt or covert. Empirical challenges arose, however, with regard to syntactic structures where such licensing seems to happen in situ, as in cases of long-distance agreement or Case-assignment (see below). The role of movement in formal feature licensing remains, however, an

empirical matter. It is one of the goals of the present thesis to present evidence of the dissociation between movement on the one hand, and agreement/Case-assignment on the other.

One should wonder, then, if by adopting the second logical possibility for the unification of the account of agreement phenomena in natural language grammar, i.e., in terms of “government,” we could have eliminated the asymmetry without inducing complications of the kind that a Spec-head approach requires.<sup>4</sup> While the complex GB notion of government might not be welcome within a minimalist approach, a simpler notion of government as a syntactic relationship holding between two elements within the structural hierarchy of a sentence, subject to certain locality considerations, is not implausible in our theory of grammar. Suppose we made this move and followed Chomsky (2000, 2001a) in assuming that such a relationship, call it *Agree*, indeed exists. In other words, suppose, unequivocally, that agreement obtains because there is a *primitive* operation in the grammar that says  $\text{Agree}(\alpha, \beta)$  in the domain  $\delta$ , where  $\alpha$  and  $\beta$  are two syntactic categories, and  $\delta$  a local domain:<sup>5</sup>

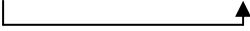


<sup>4</sup> As mentioned in fn. 1, that attempt was actually made in Raposo and Uriagereka (1990).

<sup>5</sup> I will get back to discuss the properties of the operation *Agree* in Section 2.

The approach has several advantages. For one thing, long-distance agreement relationships are captured immediately, as, for example, in English expletive constructions, such as (9):<sup>6</sup>

(9) [There T seem [to be [two men] in the room]]



At the same time, we can now treat agreement and Case assignment in a uniform fashion for both subjects and objects within the same language and across languages, without being forced into a notion of feature strength. Furthermore, the approach does not require an inflectionally rich lexicon nor is it dependent on an overt-covert distinction in syntactic derivations.

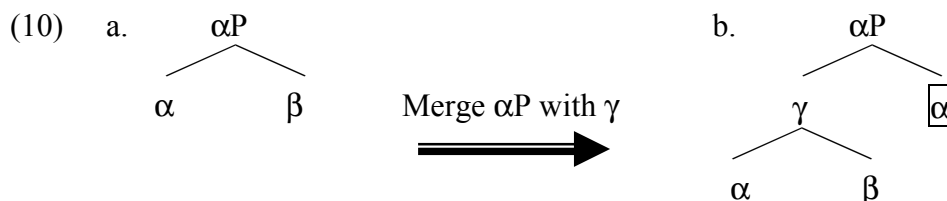
While the postulation of an operation Agree does not explain to us why formal features exist in natural language, remember that we do not have any such explanation under other approaches, either. Naming Spec-head relations as “agreement” relations is sheer labeling; it has no explanatory value. While the presence of an operation Agree in the grammar might not be conceptually necessary, it is not clear, either, that licensing of formal features has to be grounded in phrase structure theory. Conceptual necessity does not seem to be relevant here, at least at this point of our understanding of formal features such as Case and agreement.

It is worth mentioning in this regard that an attempt is made in Hornstein (2005a; 2005b; also class lectures), to derive  $\phi$ -agreement and Case assignment from

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<sup>6</sup> As it turns out, long-distance agreement (LDA) phenomena abound in the relevant literature. LDA has been observed across both finite and nonfinite domains in languages as varied as Hindi-Urdu, Chamorro, Tsez, and Passamaquoddy, among several others. For a survey of such phenomena, as well as a non-Agree-based analysis of them, see Chandra (2007).

indispensable operations of the grammar, that is, Merge, whether external or internal.<sup>7</sup> The key relation in that system is that of sisterhood, which is a free by-product of Merge, and is assumed to be the configuration where  $\phi$ -agreement and Case assignment, among other things, take place. Agreement between a head and its complement is, therefore, predicted. To derive the Spec-head relation as an agreement configuration in terms of sisterhood, Hornstein relies on the theory of bare phrase structure in Chomsky (1994), whereby notions such as “head” and “maximal projection” are relativized. Hornstein makes use of the assumption that once a maximal projection  $\alpha P$ , headed by a minimal projection  $\alpha$ , Merges with another category  $\gamma$ , to form a yet another projection of  $\alpha$ , the original  $\alpha P$  now loses its maximal projection status and becomes a minimal projection, hence a head. The relation between this newly formed head and  $\gamma$  is now one of sisterhood, as shown below in (10):



In essence, under this approach, there is no distinction between the head-complement and the head-specifier relations, which is compatible with this approach’s attempt to unify the way grammatical operations, including agreement and Case assignment, take place. The problem, however, is an empirical one: Sisterhood is too narrow a relation to account for the scope of  $\phi$ -agreement and Case assignment in natural languages, as will be shown in the discussion in the following chapters. So,

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<sup>7</sup> See the next section for a formal definition of the two types of Merge.

while this approach is promising, its success (or lack thereof) depends mainly on not only accounting for the facts that led to Agree-based approach in the first place, such as long-distance agreement and Case-assignment (cf. fn. 6), it also needs to do that without having to invoke extra nontrivial ancillary assumptions that may or may not be needed independently of the phenomena at hand.<sup>8</sup>

That said, the question of how we account for formal feature licensing, and particularly agreement and Case assignment, remains an empirical matter. Does the inclusion of Agree in our theory of grammar have empirical dividends? The current thesis is set against this background question, and it gives a positive answer to the question. In particular, it discusses a range of agreement and case assignment facts in Standard Arabic, seeking the best possible analysis for the facts, in compliance with other standard assumptions of minimalist syntax. Before I can do that, however, I have to introduce these basic concepts first.

## **1.2 Minimalist syntax: Merge, Move, and Agree**

Like its predecessors, the minimalist program (MP) takes the human language faculty as its object of study. One assumption is that the language faculty contains a lexicon and a computational system for human language ( $C_{HL}$ ) that operates on items selected from the lexicon, to construct sound-meaning pairs that get handed to both the articulatory-perceptual and the conceptual-intentional systems for interpretation. The sound-meaning pairs have to meet a condition of *Full Interpretation* at the Phonetic

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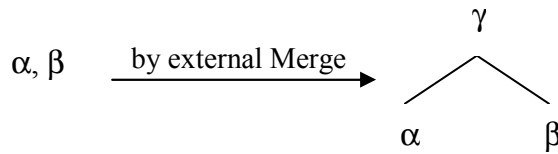
<sup>8</sup> In this regard, Chandra (2007) attempts to show that a Merge-based approach to agreement like that proposed by Hornstein (2005a,b) can in fact account for the set of long-distance agreement phenomena discussed in the minimalist literature. I refer the reader for that work for an elaborate discussion.



Form (PF) and Logical Form (LF) interfaces for a syntactic derivation to *converge*; otherwise, it *crashes*.<sup>9</sup>

As a recursive system,  $C_{HL}$  proceeds by means of the primitive operation Merge, which takes two objects  $\alpha$  and  $\beta$ , and forms a new object  $(\alpha, \beta)$  from them, subject to the *extension condition* (i.e., the requirement that Merge has to result in preserving the already existing structure, not in distorting it). Merge of  $\alpha$  and  $\beta$  is unconstrained, therefore either *external* or *internal*. In external Merge,  $\alpha$  and  $\beta$  are two separate objects that are then grouped together to form a unified syntactic object  $\gamma = \{\alpha, \beta\}$ :

(11)



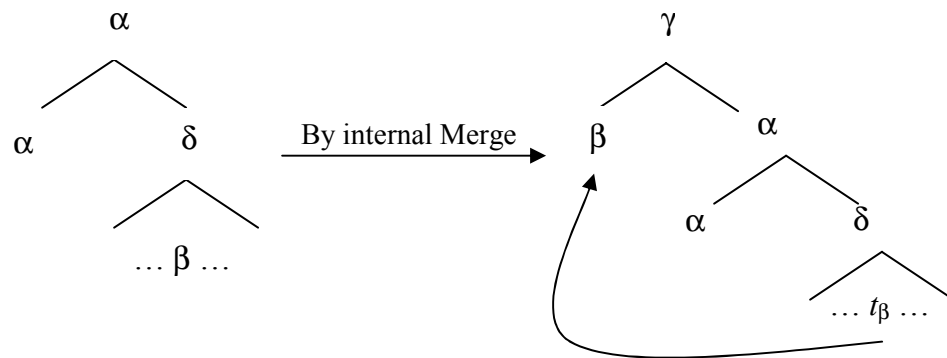
For example, a verb  $V$  Merged with its internal argument  $DP$  is an instance of external Merge.

In internal Merge, by contrast,  $\beta$ , itself a part of  $\alpha$ , is re-Merged in the Spec of  $\alpha$ , also forming a new syntactic object  $\gamma = \alpha$ .  $\beta$  is now at the *edge* of  $\alpha$ , leaving a trace  $t_\beta$  behind, and the whole operation of internal Merge is simply “Move” or displacement:

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<sup>9</sup> The principle of Full Interpretation states that there can be no superfluous symbols in syntactic representations nor superfluous steps in syntactic derivations (Chomsky 1986b; also Chapters 2-4 of Chomsky 1995).

(12)



While external Merge comes “free of charge” in any recursive system, the status of internal Merge is not so clear. Chomsky (1995) argues that displacement is an imperfection, and that movement has to be “forced.” It is a last resort mechanism to make sure that the syntactic derivation converges at the PF and LF interfaces. More recently, however, Chomsky (2001a,b) argues that movement, understood in the internal Merge sense outlined above, is also a “free” operation in natural language grammar. Under this approach, displacement is not an imperfection; absence of displacement actually is. As will be discussed in the following chapters, the analysis of the empirical facts from Standard Arabic given in this thesis, while not in total contradiction with the latest view of movement, is more in compatible with a theory of grammar where movement is actually treated as a “costly” operation driven by the need to license formal features of syntactic categories in the course of the derivation. To anticipate the upcoming conclusions, if internal Merge were free, then it would be surprising to find a language that does not show effects of (A)-movement, as will be argued is the case in Standard Arabic. If correct, the analysis presented here shows that in the presence of a base-generation analysis, triggered by certain parametric

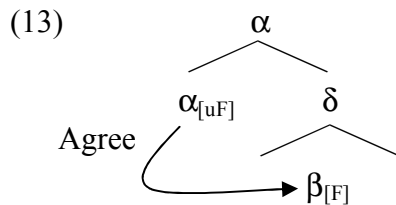
settings (in this case those that govern the licensing of null subjects and resumption), a movement analysis faces considerable empirical problems. If this is the case, then it must be that, contra Chomsky 2001a,b) internal Merge is not as “free” as external Merge.

In addition to the Merge, in its two variants, empirical facts indicate that there are features in syntactic representations that are uninterpretable at LF, e.g., agreement features on verbs and case features on nominals. Since the presence of such features would violate the principle of Full Interpretation alluded to earlier (cf. fn. 9), they have to be licensed (and deleted) in the course of the derivation, so the syntactic representation is legible at the interface. For this, the grammar needs a mechanism of licensing these uninterpretable features [uF]. One possible way is to allow these [uF] to be matched against corresponding interpretable features [F]. Feature matching takes place under non-distinctness. If feature matching is successful, [uF] is licensed, which amounts to its deletion from the structural representation at LF, hence allowing the derivation to converge.<sup>10</sup> I have already discussed earlier in this chapter that there are two ways for formal features to be licensed in syntactic structures: either in the familiar Spec-head configuration, or in terms of a primitive relation in the grammar like *Agree*. Chomsky (2001a) proposes that the Spec-head relation should be dispensed with in the account of agreement phenomena, in favor of the head-head relation *Agree*. Let’s assume so. Now, how does *Agree* work?

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<sup>10</sup> *Agree* may actually be thought of as a unitary operation, or as a complex operation that involves the two sub-operations Match and Value. If the latter, one should expect certain grammatical phenomena to obtain only under Match. Boeckx (2003a, 2003b, in press) argues that this is indeed the case with some cases of movement; see Boeckx and Gromann (2005), for example. Needless to say, we shouldn’t expect Value to exist without Match.

Agree is an operation that establishes a relationship between an element  $\alpha$  (call it a *Probe*) with uninterpretable features  $[uF]$  and an element  $\beta$  (call it a *Goal*) with matching interpretable features  $[F]$  in the c-command domain of  $\alpha$ , whereby the uninterpretable features on the Probe are *valued* by the matching interpretable features on the Goal, as in the diagram in (13):



Typical examples of uninterpretable features are  $\phi$ -features on T(ense) or wh-features on C(omplementizer), or Case features on nominals.

Agree is assumed to be subject to an “activity” condition: To get into an Agree relation both Probe and Goal have to be “active,” that is, each has to have an uninterpretable feature or features to value as a result of the operation, e.g., Agree between T and a nominal that has an unvalued case feature is permissible, but Agree between T and a nominal that has already valued its case feature (perhaps via an Agree relation with another head) is not allowed. From the perspective of nominals, we can think of this as having a “freezing” effect on them. Let’s call this the *Case Freezing Condition*, a slightly modified version of the principle stated in Uriagereka (2006):<sup>11</sup>

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<sup>11</sup> Juan Uriagereka (p.c.) attributes the CFC to Lasnik (1999). It has been mentioned in Marantz (1995) as well.

- (14) Case checking effected on X stops further computational access to X [for the purposes of Case checking].<sup>12</sup>

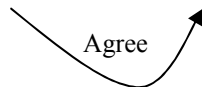
The CFC thus allows Agree between matrix T and the subject of an infinitival IP (15a), where Case is typically not assigned, thereby deriving the grammatical sentence in (15b), but not across a finite CP (16a), where Case of the embedded subject has been already licensed inside the CP, thereby prohibiting the ungrammatical in (16b), *t* marks the trace of *John*:

- (15) a. [T seems [John to be happy]]



- b. John seems *t* to be happy.

- (16) a. [T seems that [John is happy]]



- b. \*John seems that *t* is happy.

Notice here that while Case still plays an active role in this model, it actually plays a “passive” role in syntactic derivations, since it is not a probing feature. In other words, Case is not valued under Match with a Goal. Rather, it is assumed to be a by-product of  $\phi$ -agreement, i.e., Agree with T results in nominative case assigned to the Goal, whereas Agree with  $v^*$  results in accusative case assigned to the Goal. There are good reasons for treating Case as a non-primitive feature on probes.

For one thing, it prevents probing “upward,” which is problematic if allowed, since the Goal would c-command the Probe in that case. More importantly, however,

<sup>12</sup> The bracketed portion of the CFC in (14) is added here to weaken the original principle as formulated in Uriagereka (2006). As Howard Lasnik (p.c.) points out, checking of the case feature on a DP prohibits further case checking of that DP, but it does not prohibit movement for topicalization or wh-extraction for example.

the assumption might be empirically justified. For one thing, there are grammatical structures where we do not see Case assignment taking place, due to absence of DP arguments (I will discuss one such case in Chapter 3, that of prepositional passives, where the internal argument is a PP). If Case is an uninterpretable feature on T or  $v$ , then we run into the problem of accounting for why such structures do not crash, given that the Case features on these heads remain unlicensed.<sup>13</sup> If Case is not a feature on such heads, that problem does not arise. A second reason for treating Case that way has to do with the empirical fact that verbs do not carry Case. In other words, we do not see morphological reflexes of Case on verbs in the same way we see  $\phi$ -agreement, for instance. If Case is not a probing feature, that empirical fact ceases to be a mere coincidence in natural languages.

On the other hand, a question arises regarding the grammatical sentence in (15b): What is it that forces movement of *John* to the matrix clause? If the uninterpretable features of both matrix T and the DP *John* can be checked in situ, why is movement needed at all? One major consequence of an Agree-based approach, then, is that it divorces displacement from formal feature licensing. If uninterpretable features can be checked in situ, then, by economy, movement to license these features should not be allowed, under the minimalist assumption that movement is a costly

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<sup>13</sup> That problem would not arise, however, if assume, following Uriagereka (2005, 2006), that the Visibility Hypothesis (the assumption that Case licensing is required to make arguments visible for  $\theta$ -marking at LF) enforces Case to be assigned to all arguments, including PPs and CPs. If so, then having Case as a feature on probes should not be a problem. It remains, however, to determine what kind of case is assigned in these instances. Uriagereka's answer is to extend Chomsky and Lasnik's (1993) *null case* from applying only to PRO in non-finite contexts, to applying it to clausal complements and perhaps in the example cited also argument PPs. That said, the two other problems (that of probing upward and the empirical absence of case morphology on verbs) with having Case as a primitive feature on functional heads remain. Notice, incidentally, that Uriagereka's approach does not actually assume Case to be a primitive feature. I will provide an argument for this approach in Chapter 4 when discussing raising-to-object constructions in Standard Arabic.

operation, hence has to be driven, as argued earlier in this section.<sup>14</sup> Since displacement is a fact about natural language, we have to then explain why it should exist.

Within Agree-based syntax, the driving force for displacement is EPP (=Extended Projection Principle) features. Such features are also uninterpretable, though, unlike  $\phi$ -features, they do not “literally” require valuation; rather they are licensed by the Merging of an element in the specifier of the head that carries the EPP feature. As Chomsky (2000:102) states, “[e]ach CFC [core functional category] also allows an extra Spec beyond its s-selection: for C, a raised wh-phrase; for T, the surface subject; for  $v$ , the phrase raised by object shift,”<sup>15</sup> each of which may then be called an EPP position. Licensing of formal features is thus dissociated from movement in this system.

Such dissociation might actually have an empirical dividend for the range of languages where no movement seems to be involved in the licensing of agreement and Case. In such languages agreement and Case assignment take place in the thematic domain, without inducing movement of DPs. In fact, since the *Pronominal Argument Hypothesis* (PAH) was first proposed by Jelinek (1984), DPs in languages with freedom of word order and a rich head-marking or dependent-marking system have been analyzed as base-generated adjuncts to the thematic domain. Extending the PAH to polysynthetic languages, Baker (1996, 2001) proposes a polysynthesis parameter, whereby languages differ in whether they license the arguments of a verb

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<sup>14</sup> Recall that this is incompatible with the more recent assumption that movement, conceived as internal Merge, is a “free” operation.

<sup>15</sup> “Extra” in “extra spec” is intended to exclude Specs created for s(ematic)-selection purposes, e.g., an external argument Merged in Spec $v^*P$  is not in an EPP position; it is in a  $\theta$ -theoretic position.

through incorporation or through other mechanisms in the grammar such as movement. A theory of grammar that links agreement and Case assignment to movement has always been challenged by the existence of “polysynthetic” languages. If agreement and Case can, however, be licensed in situ, without movement, then the existence of such languages is not surprising at all. I will argue that Standard Arabic is a language where (A-)movement does not exist, yet agreement and Case assignment are abundant.

On the other hand, Uriagereka (2006) provides an interesting discussion of the range in A-movement possibilities in natural languages, pointing out that languages differ with regard to the extent they allow their DPs to move successive cyclically. So, while all the languages he discusses exhibit A-movement in passives, they differ with regard to allowing DPs to raise successive cyclically across embedded domains. At one end of the continuum we have languages like Romanian that allow hyper-raising across both tensed and tenseless clauses, and at the other end we have languages like Russian that do not allow raising even across a tenseless TP. Between these two extremes fall languages like English, which allows raising only across tenseless domains, and German, which allows raising out of a tenseless domain, but only once. This is a remarkable fact about human languages, especially in light of the previously mentioned CFC in (14). What is it that makes languages differ the way they do with regard to A-movement possibilities? While it is not my goal in this thesis to address such a question in detail, referring the reader to Uriagereka (2006) for an interesting parameterization analysis in terms of the strength of the D(eterminer) system in a language and how it induces (in)accessibility of DPs for



further computation, it is one of the main themes in this thesis to show that Standard Arabic is actually the language at the negative end of the A-movement continuum, with no evidence for A-movement altogether in the language, including in passives and other prototypical A-movement structures (cf. Chapter 3 of this thesis).

One final point is in order. A question was raised earlier in the discussion in Section 1 of this chapter as to whether Agree meets the “virtual conceptual necessity” requirement of minimalism, to which my (perhaps implicit) answer is that it does not. But perhaps Agree meets another minimalist desideratum: that language is designed to satisfy interface conditions. If the existence of uninterpretable features such as Case and  $\phi$ -agreement is an empirical fact, and if such features are illegible at the LF interface, then, the presence of a primitive operation to license them in syntactic derivations is arguably an instance of “good design.” Uninterpretable features of this kind might be the imperfection or the virus that gets the linguistic system activated, and Agree might be nothing but the response of that system to the conditions imposed on it by the interfaces to get rid of these viral elements. If so, then questions regarding the “conceptual necessity” of Agree are irrelevant; empirical necessity makes it clear that such a mechanism or an analogue to it is required for structural representations to converge at the interfaces, and as such, it should be viewed as an instance of good design.

To sum up, syntactic structures are built via the recursive procedure Merge, in both its external and internal guises. Uninterpretable formal features on functional heads (Probes) are licensed via Agree with matching interpretable features on substantive categories (Goals), thereby allowing the derivation to converge at the

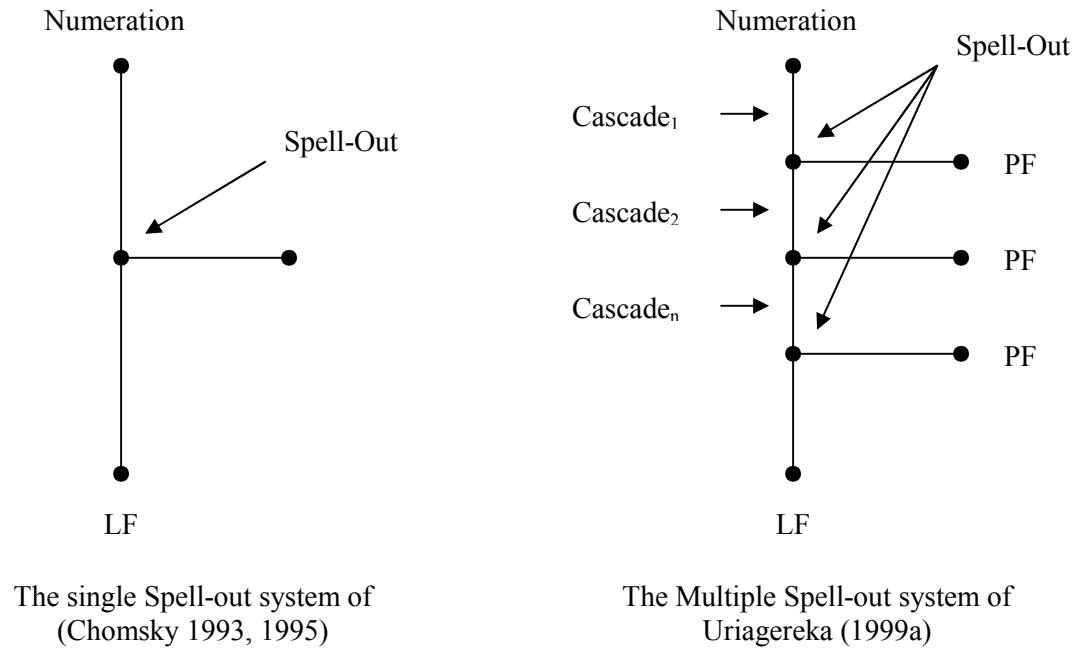
(LF) interface. Displacement is also a reflex of an EPP feature that requires a head to have a specifier. Movement is thus driven by EPP satisfaction, and is therefore dissociated from Case and agreement licensing.

### **1.3 Multiple Spell-Out and phase-based syntax**

In the previous section I introduced the two main operations needed to generate syntactic representations: Merge (external and internal) and Agree. In this section, I discuss the recent proposal that syntactic derivations proceed in cycles or phases, in what has come to be known as phase-based syntax.

In Uriagereka (1999a), a proposal is made whereby the computational system of human language allows syntactic derivations to access the phonological component not only once, as was generally assumed then, but multiply so. In other words, instead of a single Spell-Out point at which the derivation is sent to the PF interface (cf. the diagram in (6)), as originally proposed in (Chomsky 1993, 1995), Uriagereka offers a theory of syntactic derivation in which the relationship between the computational system and the PF interface is “multiply interactive;” precisely, a theory of multiple points of Spell-Out, whereby certain chunks of structure, called *cascades*, are sent to PF in the course of a single syntactic derivation. The difference between the two approaches may be represented graphically as in (17), where “numeration” stands for the array of lexical items associated with a syntactic derivation:

(17)



Uriagereka’s *Multiple Spell-Out* (MSO, henceforth) proposal was mainly motivated by the desire to accommodate certain empirical facts while maintaining a version of Kayne’s (1994) *Linear Correspondence Axiom*, which states that PF linearizations are dictated by the syntactic relationship of “command.” As originally formulated by Kayne, the LCA involves the two steps in (18):<sup>16</sup>

- (18) a. Base step: If  $\alpha$  commands  $\beta$ , then  $\alpha$  precedes  $\beta$ .  
 c. Induction step: If  $\gamma$  precedes  $\beta$  and  $\gamma$  dominates  $\alpha$ , then  $\alpha$  precedes  $\beta$ .

Uriagereka’s main proposal attempts to eliminate the induction step in favor of a one-step LCA whereby the linearization in (18b) obtains if the complex object  $\gamma$  is simply “Spelled-out” in a *separate derivational cascade*, collapsing into something akin to a

<sup>16</sup> The base step accounts for linearization in simple structures such as *John likes fish*, while the induction step is needed for linearization of more complex structures, such as *My elder brother likes fish*, where the linearization of *my*, *elder*, and *brother* with regard to the rest of the structure follows from their being “dominated” by the complex subject [my elder brother].

giant word, call it a “superword,” and as such is rendered linearizable for PF purposes. The elements dominated by this Spelled-out superword will be frozen within  $\gamma$ , hence inaccessible to further computation, though they will be linearized in the same way  $\gamma$  does with respect to the rest of structure that  $\gamma$  interacts with. As such, the induction step of Kayne’s LCA is subsumed under the base step, a conceptually desirable reductionism. But what is equally interesting is that the MSO system has some empirical dividends as well. As a case in point, consider the mystery of the classical *Condition on Extraction Domains* (CED), as first formulated by Huang (1982): Why is it that complements are extraction-transparent (as shown by the grammaticality of wh-movement in (19a)), whereas noncomplements (i.e., subjects and adjuncts) are extraction-opaque (as the ungrammaticality of (19b, c) indicate)?<sup>17</sup>

- (19) a. Who did you see [a critic of t]  
       b. \*Who did [a critic of t] see you  
       c. \*Who did you go home [after you saw t]

The CED states a fact, observable in many languages, but it is far from an explanation. If Uriagereka’s MSO proposal is on the right track, we seem to have a natural explanation for that otherwise mysterious fact. If noncomplements, in contrast to complements, are Spelled-out in a separate derivational cascade to render them linearizable for the purposes of the LCA, it follows that extraction out of these substructures becomes impossible: If an element is contained within a Spelled-out substructure, it is no longer visible for a computational process such as movement.<sup>18</sup>

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<sup>17</sup> The MSO as proposed in Uriagereka (1999a) focuses on CED effects for subjects, though not for adjuncts. An extension of that proposal to handle adjuncts is offered in Uriagereka (2002a).

<sup>18</sup> Other empirical gains discussed in Uriagereka (1999a) include an account of the properties of phonologically focused phrases as well as the contrast between simple wh-phrases (e.g., *who* and *what*) and complex wh-phrases (e.g., *which man* and *which book*) with regard to superiority effects.

In sum, the MSO proposal offered a radical approach to the way syntactic derivations proceed, allowing the computational system to interactively access the interface systems, not once, as in the single Spell-out approach, but multiply, the choice determined by the LCA.

In the same conceptual vein, though with an overall different implementation, Chomsky (2000, 2001a, 2001b) proposes a theory of syntactic derivation with MSO, whereby derivation is assumed to proceed by “phase,” each phase a separate chunk of structure, built from a distinct *subnumeration*, and then Spelled-out or *Transferred* cyclically to the interfaces. The model could be graphically represented as in (20):<sup>19</sup>

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Meanwhile, a problem for the MSO approach obviously arises with regard to possible extraction of left branch elements in sentences such as

- (i) Which professor<sub>i</sub> did you say [<sub>i</sub> left]

For space considerations, I refer the reader to Uriagereka (1999a), who discusses a possible solution. Other problems also arise with regard to the possibility of extraction from subjects in languages like Japanese as well as general problems with the LCA itself. For a modified and revised version of the MSO proposal see Uriagereka (2002a) where such problems and possible solutions are addressed in detail.

<sup>19</sup> Unlike Uriagereka’s original proposal, however, Chomsky’s MSO system is not motivated by LCA’s considerations, but by the desire to reduce “operative complexity.” The argument is that the computational system does not have to carry along the whole structure throughout the derivation; computational complexity is reduced if at certain points during the derivation the system sends the structure to the interfaces, freeing memory space for subsequent operations. Howard Lasnik (personal communication) told me that initially the “phasing” mechanism might have been empirically, rather than conceptually, motivated, in response to a problem that arose with Chomsky’s Merge-over-Move Principle, whereby Merge of an element from the numeration into the structure is assumed to be less costly than moving an element from within the already existing structure. This explains, for example, the contrast between (i) and (ii) below, where movement of *someone* to satisfy the EPP property of embedded T in (ii) is blocked by the availability of the expletive *there* in the numeration as a candidate for satisfaction of this same property:

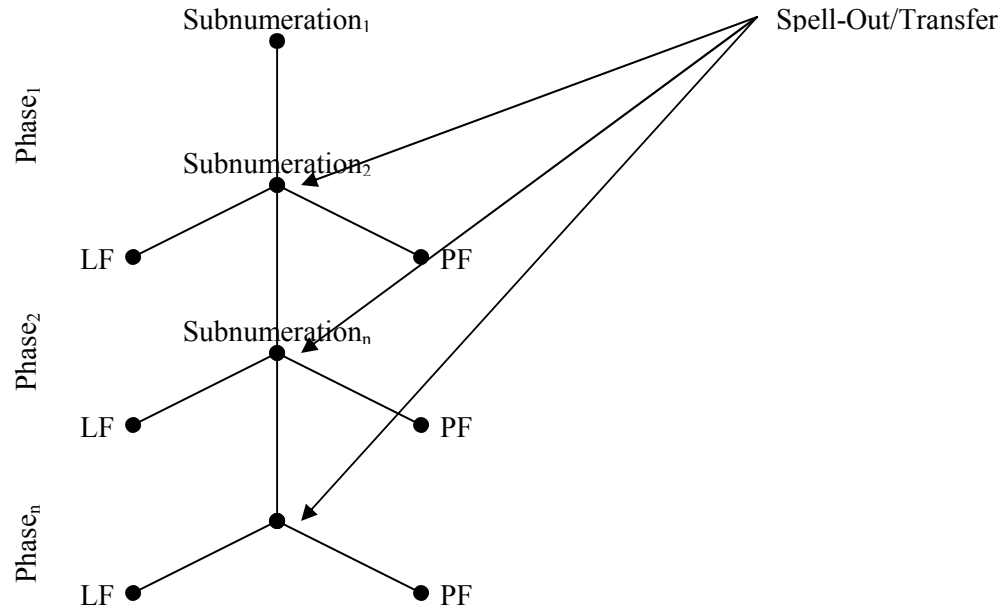
- (i) There seems to be someone in the room.  
(ii) \*There seems someone to be in the room.

A problem then arises with examples such as (iii), where movement seems to have taken place despite the presence of an expletive in the numeration:

- (iii) There is a rumor that someone was in the room.

To solve this problem, Chomsky proposed that the reason (iii) is good is because derivations take place at phases, each phase with its own subnumeration. (iii) is thus ruled in within this system because at the derivational point when *someone* moved to Spec embedded TP *there* was not available in the subnumeration of the embedded CP, hence the Merge-over-Move principle is rendered irrelevant at this point.

(20)

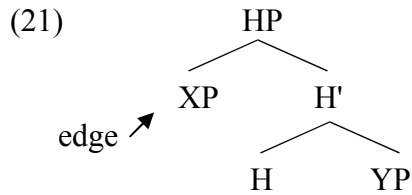


The phase-based system of  
Chomsky (2000, 2001a, 2001b)

Chomsky (2001a) identifies, rather stipulatively,  $v^*P$  and CP as phases, arguing that each comprises “a proposition,” the former representing argument structure, the latter tensehood and illocutionary force of a sentence.<sup>20</sup> In addition, phase heads, like other functional heads in the grammar, may carry an EPP feature, as mentioned in the previous section (cf. the quote on p. 17). The EPP position is at the “edge” of the phase, where the edge is an *extra* Spec at the left periphery of the phase.<sup>21</sup> In (21), if H is a phase head, then HP is a phase, and XP is at the edge of the phase. YP, the sister of H, is called the complement domain of the phase:

<sup>20</sup> The stipulation is reminiscent of the *Barriers* framework, in which both CP and VP were treated as syntactic chunks where escape hatches become available for moved elements.

<sup>21</sup> The EPP feature is sometimes referred to as a (P)eripheral feature, as well. More recently, Chomsky (2001b:10) suggests to view the EPP as an OCC(urrence) feature, that, when assigned to a head H, requires H to be an occurrence of some  $\beta$  (through the application of internal Merge), where an occurrence of  $\alpha$  is taken to be a sister of  $\alpha$ . Since nothing in the discussion here hinges on this technical innovation, I will continue to use the term EPP in the sense defined above.



Crucially, however, we also have to make the further assumption that the edge of a phase remains accessible for further computation, whereas the rest is “impenetrable” after Spell-Out applies, an assumption that Chomsky (2000:108) calls the *Phase Impenetrability Condition* (PIC):

- (22) In a phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge are accessible to such operations.

where the domain of H = sister of H, and the edge of H = a hierarchy of one or more Specs. In that sense, the edge of a lower phase  $Ph_i$  is technically part of the next higher phase  $Ph_{i+1}$  for the purposes of Spell-Out.

The phase edge, thus, serves as an escape hatch from a lower phase to a higher phase. This will be required to account for successive cyclic movement across phases, for example, as shown by the derivation in (23) of the wh-question “*Who did you see?*”, where the wh-phrase *what* moves first to the edge of the  $v^*P$ -phase on the way to its final destination at the edge of the CP-phase:

- (23)  $[_{CP} \text{ what}_i \text{ did } [_{TP} \text{ he}_j [_{v^*P} t_i t_j v^* [_{VP} \text{ see } t_i]]]$
- 

Chomsky also proposes that phase edges are where some of the so-called “surface semantics” effects arise, such as topic, focus, given information, and other subtle, even though little understood, interpretive effects. This seems to be

empirically supported by the fact that topicalization and left dislocation of XPs (e.g., “*This book, I read it*”) is typically to the periphery of the clause (that is, the edge of the CP phase), and object shift in languages that allow it (e.g., “*Read this book John*” in Standard Arabic), while not as clearly, seems to target the edge of the thematic domain (i.e., the v\*P phase).<sup>22</sup> I will assume that something along those lines is true. Interpretive effects are the result of appearing in a peripheral position. Unlike Chomsky, however, I do not confine these peripheral positions to those created by phase heads. As I will argue in Chapter 2, interpretive effects may arise below C, in the peripheral position of heads as varied as T, Neg(ation), or Mod(ality). In essence, I will assume that the periphery is not a position, but a “zone,” to borrow a term from Uriagereka (2005 class notes; see also the discussion of pragmatic effects in Uriagereka 2006). Under this assumption, “peripheral,” contra the literal meaning, is “syntactically salient,” and is, therefore, associated with semantic effects.<sup>23</sup>

Finally, it remains to discuss how locality is encoded within a cyclic system, like the one described above. Since the operation Agree is central to this thesis, I will assume, following, Chomsky (2000a:122) that locality reduces to “closest c-command”:

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<sup>22</sup> Examples of object shift in Icelandic and Standard Arabic are discussed in Chapter 3 of this thesis.

<sup>23</sup> There have been attempts to reduce the standard EPP (i.e., the assumption that “all clauses must have subjects”) to the semantics of predication, see Rothstein (1983), Williams (1980), and more recently Butler (2002). For an extensive and insightful discussion of the EPP, see Bošković (2002), where the EPP is argued to be reducible to independently motivated principles of the grammar. For a discussion of Bošković’s arguments, see Soltan (2003a). Other works that argue for the elimination of EPP are Epstein and Seely (1999), Castillo *et al* (1999), Grohmann *et al* (2000), and Haeberli (2000). In contrast, Lasnik (1999, 2001, 2003) provides a strong argument from English ECM constructions that the EPP is empirically indispensable.



- (24) A Goal  $G_1$  blocks Agree between a Probe  $P$  and a Goal  $G_2$  if  $G_1$  and  $G_2$  are both in the c-command domain of  $P$  and  $G_1$  c-commands  $G_2$ .

Violation of the locality condition on Agree is sometimes referred to as *defective intervention (DI) effects* (Chomsky 2000:123). This is true, for example, in the so-called superraising structures (25a), wh-islands (25b), and Icelandic quirky subjects (26a,b):

- (25) a. \*Mary<sub>i</sub> seems that it was told  $t_i$  that she got the job.

- b. \*Who<sub>i</sub> do you wonder whether John met  $t_i$ ?

- (26) a. Mér            \*virðist/virðast   þeir            vera            skemmtilegir  
Me.DAT    seem.3sg/3pl   they.NOM   be            interesting  
“I thought she was bored with them.”

- b. Mér            fannst/\*fundust   henni            leiðast   þeir  
Me.DAT    seem.3sg/3pl   her.DAT    bore            they.NOM  
“It seems to me that they are interesting.”

In (25a) extraction of *Mary* across *it* is barred, since the expletive gives rise to a DI effect. In (25b), movement of *who* to matrix SpecCP is blocked due to the presence of a closer Goal, i.e., the wh-phrase *whether*. In the Icelandic examples in (26), taken from Boeckx and Jeong (2002), agreement with a nominative element within the embedded clause, which is normally allowed, as shown by (26a), is, however, blocked in (26b) due to the DI effect induced by the presence of a dative subject within the embedded clause. Intervention is thus not dependent on the (in)activity of the intervener. Crucially, though, the intervener has to c-command the potential Goal. If no c-command relation holds, then Agree can take place. In Chapter 3, I will

provide data from deontic modality and possessive/locative constructions in Standard Arabic, showing that Agree may take place with a Theme argument in the presence of the Experiencer argument, when this latter is contained within a PP; and therefore does not c-command the Theme DP.

Notice, finally, that locality is still observed in a “relativized” manner, in the sense of Rizzi (1990): Only interveners of the “same type” block Agree (and Move for that matter). So, the subject *you* does not block wh-extraction of the object wh-phrase in “*Who did you meet?*” since the subject does not have the relevant feature deriving wh-extraction, hence not a potential target for Agree or Move. Following standard convention, I will refer to violations of locality of this sort as “relativized minimality,” or simply, “minimality” violations.

#### **1.4 Scope and organization of the thesis**

The focus of this thesis is a range of morphosyntactic phenomena in Standard Arabic (SA), an Afroasiatic language belonging to the Semitic subfamily. A version of SA survives today in Arabic-speaking countries as the so-called Modern Standard Arabic (MSA) dialect, which is mainly used in formal registers. The linguistic situation is often referred to by sociolinguists as *diaglossia*, the co-existence of two related language varieties with clear division of labor between them: one variety (typically referred to as the colloquial dialect) is used for everyday conversation, while the other (the MSA dialect) is used in formal contexts, typically in writing and scripted speech.

While speakers of modern Arabic dialects do not typically have intuitions on SA, except those of second language learners, the language has probably one of the most elaborate and documented grammatical traditions. Medieval Arab grammarians

produced elaborate descriptions of the syntax and morphology of the language. In their grammatical description, Arab grammarians relied on two main sources for grammatical documentation: First, the attestation of a particular structure in texts (typically poetry or the Quran), and second, the grammaticality judgments of native speaker informants. The data discussed in this thesis are, therefore, based on comparable examples in traditional grammar texts, such as the ones listed in the bibliography. Gradations of grammaticality are judged based on what Arab grammarians considered a “marked” or “less preferable” structure. Admittedly, there are cases where the grammaticality judgments are subtle, and where Arab grammarians disagree, in the same way today’s linguists disagree on the grammatical status of sentences in their languages. I have tried as much as I can to use data that have agreed-on judgments, even though this has not been easy, particularly in those cases where some of the constructed examples are hardly (if ever) discussed in the Arabic grammatical tradition (e.g., parasitic gap constructions). In such cases, I assigned a grammatical status to a sentence based on what the grammarians said with regard to the particular property involved in the construction (e.g., deletion of a pronominal object (i.e., leaving a gap) is typically referred to by the grammarians as possible, albeit confined to “literary” styles). All in all, while assigning grammaticality judgments to some of the data in the following chapters has been a challenging task at times, it is not any better or worse than what we typically come across in this kind of linguistic research.

A question that arises here is why not use data from the modern Arabic dialects of today. The answer to that is “Case.” Since Case assignment is a major

concern of this thesis, especially in relation to  $\phi$ -agreement, data from today's Arabic dialects are not as interesting for the purposes of this piece of research, since modern Arabic dialects lost case morphology (except in the pronominal system). For this reason, the main focus in this thesis is data from SA. Occasionally, though, data from modern dialects are included, either to contrast them with SA data, or to indicate that the facts that hold in SA also hold in some other Arabic dialects.

As indicated earlier, the focus of this thesis is a set of morphosyntactic phenomena in SA, mainly related to Case assignment and  $\phi$ -agreement. In Chapter 2, I discuss the familiar subject-verb agreement asymmetry (SVAA) associated with word order alternations in the language, proposing that it is best treated, not in terms of movement and Spec-head agreement as has been proposed previously, but in terms of assigning two different structures for both word orders. I argue then that the SVAA is the result of one of the two structures having a null subject *pro*, which is subject to a standard identification requirement, which forces the presence of rich agreement. Crucially, for subject-verb agreement to take place in either word order, the agreement operation has to work “downward,” in compliance with an Agree-based approach, hence providing support for that approach. In addition, I extend that analysis to account for the phenomenon of first conjunct agreement by arguing that it follows from the interaction between the operating downward Agree and an operation of postcyclic Merge that allows ConjPs to adjoin to a first conjunct after agreement has already taken place.

In Chapter 3, I discuss data from passive constructions, raising, and object shift (OS) in SA, showing that the language does not resort to A-movement in such

cases. The analysis proposed in Chapter 2 is argued to extend to such constructions. In this respect, I discuss the phenomenon of uniform default agreement in prepositional passives and with raising predicates, showing that it follows from standard assumptions regarding opacity of certain syntactic domains, rendering DPs inside them inaccessible for agreement. I end the chapter with a discussion of OS in SA, raising the question of whether it is an instance of A- or A'-movement, and concluding that most of the evidence is inconclusive, except the extraction facts in double object constructions, which shows that the OS is an A'-movement.

Chapter 4 discusses what has been traditionally referred to as raising-to-object (RTO) constructions, where what looks like a DP in the embedded clause appears with accusative case assigned to it by the matrix verb. In this respect, I discuss three types of RTO constructions, each of which occurs with a specific set of predicates. In particular, I discuss RTO constructions where the matrix verb is of the *want*-type, the *believe*-type, and the perception-verb-type. I conclude that the empirical evidence supports treating these structures as instances of base-generation without movement involved.

Chapter 5 shifts the focus from the agreement and case phenomena to discuss formal feature licensing between heads in the functional domain, phenomena that are typically handled via head movement (HM) operations. In this respect, I show why HM is theoretically problematic for the minimalist program, which led to the recent proposal for treating HM as an operation of the phonological component. To test this hypothesis, I revisit the interesting paradigm of negation in SA, a classical HM phenomenon, showing that a “hybrid” analysis of negation has both theoretical and

empirical gains. Crucially, since the analysis is based on extending Agree to applying in head-head relations in the functional domain, it serves directly to support Agree as a built-in primitive operation of the grammar, in conformity with one of the main these in this thesis. I then extend this analysis to account for the properties of imperatives in SA and explore some cross-linguistic implications.

In the concluding chapter I sum up the analysis made in the previous chapters, explore some of its implications to the theory of grammar in general, as well as point to areas of future research.

## Chapter 2

### On word order alternation and agreement asymmetries in Standard Arabic

Against the background of the theoretical assumptions of Chapter 1, I revisit in this chapter a number of agreement phenomena in Standard Arabic (SA) syntax from a minimalist perspective, providing an analysis for each. In particular, I discuss the familiar subject-verb agreement asymmetry in SA, the absence of this asymmetry with pronominal subjects, as well as the phenomenon of first conjunct agreement.

#### 2.1 The subject-verb agreement asymmetry in Standard Arabic

Even though the unmarked word order in SA is VSO, the language also allows SVO orders. While the two word orders differ in several ways that I will discuss in due time, the main theme of this chapter is the asymmetry in verbal agreement associated with this word order alternation. In particular, while SV orders show full agreement between subject and verb in all  $\phi$ -features as can be seen in (1a), VS orders, by contrast, show only partial agreement, typically in gender features (1b).<sup>1</sup> Neither order can exhibit the agreement pattern of the other, as the ungrammaticality of (1c,d) show:<sup>2</sup>

- (1) a.   ʔal-ʔawlaad-u   qaraʔ-uu           ʔal-dars-a           ✓SV+full agreement  
          the-boys-NOM   read 3plmas       the-lesson-ACC

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<sup>1</sup> Throughout this chapter and the next ones, I will use the abbreviations “VS” for constructions with a postverbal DP, and “SV” for constructions with a preverbal DP. As the reader will notice shortly, the preverbal DP in SV orders will be argued not to be a “subject.” For convenience, though, I will continue to use “SV” to refer to this kind of word order.

<sup>2</sup> Throughout this thesis, I will follow the convention of representing the SA definite article affix *ʔal-* in its phonemic, rather than assimilated phonetic, form. The only cases where I depart from this convention is when citing data from other authors’ work, and in data from dialectal Arabic.

- |    |                |              |                |                       |
|----|----------------|--------------|----------------|-----------------------|
| b. | qaraʔa         | l-ʔawlaad-u  | ʔal-dars-a     | ✓VS+partial agreement |
|    | read 3sgmas    | the-boys-NOM | the-lesson-ACC |                       |
| c. | *ʔal-ʔawlaad-u | qaraʔa       | ʔal-dars-a     | *SV+partial agreement |
|    | the-boys-NOM   | read 3sgmas  | the-lesson-ACC |                       |
| d. | *qaraʔ-uu      | l-ʔawlaad-u  | ʔal-dars-a     | *VS+full agreement    |
|    | read 3plmas    | the-boys-NOM | the-lesson-ACC |                       |

Gender agreement morphology takes the form of a *-t* morpheme suffixed to the verb when the subject is feminine, as the data in (2) below illustrates:

- (2) a. ʔal-fatayaat-u    qaraʔ-na    ʔal-dars-a  
           the-girls-NOM    read-3plfem    the-lesson-ACC
- b. qaraʔa-t    ʔal-fatayaat-u    ʔal-dars-a  
           read-3sgfem    the-girls-NOM    the-lesson-ACC
- c. \*qaraʔa    ʔal-fatayaat-u    ʔal-dars-a  
           read-3sg    the-girls-NOM    the-lesson-ACC

As the data in (2) show, while there is no agreement in number on the verb in the VS order, gender agreement is always manifest in the word order.

The subject-verb agreement asymmetry (SVAA, henceforward) does not obtain in some of today's Arabic dialects, however. Aoun *et al* (1994) report that this is the case for both Moroccan and Lebanese Arabic (MA and LA, respectively, from now on). I illustrate here with the data in (3) from MA (Aoun *et al* 1994:196):

- (3) a. lə-wlaad    nʔas-u    ✓SV+full agreement  
           the-children    slept.3pl



- b.      \*nʕas      lə-wlaad      \*VS+partial agreement  
          slept.3sg   the-children
- c.      nʕas-u      lə-wlaad      ✓VS+full agreement  
          slept.3pl   the-children
- d.      \*lə-wlaad      nʕas      \*SV+partial agreement  
          the-children   slept.3sg

There have been a few analyses of the SVAA in the relevant literature, mainly within the GB framework and the minimalist program. In the next section I discuss some of these analyses and provide a critical evaluation of each.

### 2.1.1 A Spec-head agreement approach to the SVAA

Within the Government-Binding (GB) framework subject-verb agreement (as well as nominative case assignment) was assumed to be a reflex of a configurational relationship between a head and its specifier, specifically between I and the DP in its Spec, where I is a feature complex of both tense and agreement features. Given this main assumption on how agreement obtains in syntactic configurations, two main analyses of the SVAA in SA have been proposed: the *null expletive analysis* (Mohammad 1990, 2000; Ouhalla 1994, among others) and the *agreement loss analysis* (Aoun *et al* 1994). Under the null expletive analysis, full agreement in SV orders is taken to be the result of a Spec-head relation between I and the lexical subject in its Spec (4a), whereas partial agreement in VS orders is the result of a Spec-head relation between I and a null expletive in its Spec (4b):<sup>3</sup>

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<sup>3</sup> There are differences in the details of the null expletive analyses discussed by different authors. I present here the basic idea behind the analysis, which is due to Mohammad 1990.

- Spec-Head  
Agreement  
┌───┐  
└───┘
- (4) a. SV: [<sub>IP</sub> Subj<sub>j</sub> V<sub>i</sub>+I [<sub>VP</sub> t<sub>j</sub> t<sub>i</sub> ...]]
- Spec-Head  
Agreement  
┌───┐  
└───┘
- b. VS: [<sub>IP</sub> *pro*<sub>EXPL</sub> V<sub>i</sub>+I [<sub>VP</sub> Subj t<sub>i</sub> ...]]

A variation on the same Spec-head agreement theme is proposed in Aoun *et al* (1994), where agreement is assumed to actually obtain in both orders under Spec-head agreement between I and SpecIP, but that agreement in VS structures then gets “lost” under further verb raising to a head designated as F in their analysis, as shown in the structural representations in (5):

- Agreement gained  
and retained  
┌───┐  
└───┘
- (5) a. SV: [<sub>IP</sub> Subj<sub>j</sub> V<sub>i</sub>+I [<sub>VP</sub> t<sub>j</sub> t<sub>i</sub> ...]]
- Agreement  
gained  
┌───┐  
└───┘
- b. VS: [<sub>FP</sub> F+[V<sub>i</sub>+I]<sub>k</sub> [<sub>IP</sub> Subj<sub>j</sub> t<sub>k</sub> [<sub>VP</sub> t<sub>j</sub> t<sub>i</sub> ...]]]
- Agreement  
lost  
┌───┐  
└───┘

From a minimalist perspective, each of these two analyses seems to rely on the presence of a stipulated construct or operation that does not seem to be independently motivated. I discuss each below.<sup>4</sup>

On a conceptual level, the presence of a null expletive is hard to motivate in the grammar. A null expletive is LF-inert and PF-empty; hence it has no interface value; it simply lives and dies in the syntax. In a word, it is exactly the kind of

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<sup>4</sup> It is worth noting that the null expletive analysis of VS orders in null subject languages is generally attributed to Rizzi 1982.

element that a minimalist grammar should not allow (cf. Uriagereka 2001; Holmberg 2003; cf. also Borer 1986; Alexiadou and Anagnostopoulou 1998).

But the null expletive analysis also induces some technical complications. In particular, we run into a problem accounting for why gender agreement obtains in the presence of the null expletive. To solve this problem, we have to stipulate first that a null expletive is third person singular, but is unspecified for the gender feature. A mechanism of feature transmission can then transmit the gender feature, though crucially not the number feature, of the postverbal lexical DP, to this null expletive. As will see shortly, there are cases where the null expletive will have to copy all the features of the postverbal subject. So, in these cases, we have to assume that feature transmission applies to all features, and not just to gender. It turns out, however, as Fassi Fehri (1993) points out, that assuming that null expletives are third person singular does not adequately reflect the properties of overt expletives in the language. Fassi Fehri points to cases where the overt expletive pronoun has to be plural in the so-called nominal sentences (i.e., sentences without an overt verb), as in the following examples:

- (6) a.   hum           l-ʒunuud-u  
          they.mas    the-soldiers.NOM  
          ‘‘It is the soldiers.’’ Or ‘‘That’s the soldiers.’’
- b.   hunna       n-nisaaʔ-u  
          they.fem   the-women.NOM  
          ‘‘It is the women.’’ Or ‘‘That’s women.’’

As Fassi Fehri argues, if the language does have overt expletives that are non-singular, then restricting the null expletive to be singular in number does not reflect the pronominal expletive system that the language has. We thus have to stipulate that null expletives are of the particular variety that appears in “verbal sentences,” and do not parallel those we find in “nominal sentences,” which is another technical complication and forces us into a construction-specific analysis.<sup>5</sup>

On an empirical level, while the presence of a null expletive might be motivated by the fact that SA is a null subject language, it is not clear what other than that counts as empirical evidence for the existence of an expletive *pro*. Judging from the relevant literature, one can notice two types of empirical claims made here. The first is that the presence of a null expletive accounts for certain agreement patterns, like the one discussed here, which means that the only evidence we have for the presence of a null expletive is the range of phenomena we are using the null expletive to account for, a hardly desirable situation. The second, though perhaps more implicit, argument for the existence of expletive *pro* is based on the assumption that overt pronominals have covert counterparts (e.g., referential pronouns vs. ‘little’ referential *pro* or ‘big’ PRO). A piece of evidence in support of the presence of a null expletive in VS orders in SA comes from sentences such as (7) below, where an overt expletive pronominal appears encliticized to the matrix clause complementizer *ʔinna* as shown by the contrast between (7b) and (7c). (7a) is the sentence without an overt C:

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<sup>5</sup> It is worth mentioning that I am following Fassi Fehri (1993) here in assuming that the relevant pronominals are actually expletives. Under an analysis where such pronominals are treated as referential, the data in (6) would not be problematic to the null expletive analysis.

- (7) a.    yabduu            ?anna   l-?awlaad-a        qad    haDar-uu  
           seem 3sgmas    C            the-boys-ACC    PCL    came-3plmas  
           “It seems that the boys have come.”
- b.    ?inna-hu   yabduu            ?anna   l-?awlaad-a        qad    haDar-uu  
           C-it            seem 3sgmas    C            the-boys-ACC    PCL    came-3plmas  
           “It seems that the boys have come.”
- c.    \*?inna   yabduu            ?anna   l-?awlaad-a        qad    haDar-uu  
           C            seem 3sgmas    C            the-boys-ACC    PCL    came-3plmas

But the assumption that the presence of overt expletives entails the presence of null expletives is not necessarily empirically justified. Existential expletives do not have null counterparts, which would be a mystery if the logic above is sound. In SA, for example, the overt existential expletive is *hunaaka*:

- (8)    hunaaka    rajul-un        fii    ?al-maktab-i  
           there        man-NOM    in    the-office-DAT  
           “There is a man in the office.”

Based on the sentence in (8), one should expect a comparable sentence with a null existential expletive, an expectation that is not borne out, since (9) is ungrammatical:

- (9)    \**pro*<sub>EXPL</sub>   rajul-un        fii    ?al-maktab-i  
                          man-NOM    in    the-office-DAT  
           “There is a man in the office.”

The only grammatical version of (9) is a locative inversion structure, as in (10):

- (10)    fii    ?al-maktab-i        rajul-un  
           in    the-office-DAT    man-NOM  
           “There is a man in the office.”

To prevent the null expletive analysis from overgeneration, we have to stipulate then it is only confined to expletives of the impersonal variety, and not the existential type, a complication unneeded if we assume that null expletives simply do not exist.<sup>6</sup>

Perhaps the strongest empirical argument against the presence of null expletives comes from VS structures where the postverbal subject is a pronominal or a conjoined subject whose first conjunct is a pronominal.<sup>7</sup> In both cases, the verb will show full agreement (i.e., in person, number, and gender) with that pronominal:

- (11) a.    ʒaaʔ-uu            hum        laa    ʔabaaʔ-u-hum  
              came-3plmas    they<sub>MAS</sub>   not   fathers-NOM-their<sub>MAS</sub>  
              “They came, not their fathers.”

- b.    \*ʒaaʔa            hum        laa    ʔabaaʔ-u-hum  
              came-3sgmas    they<sub>MAS</sub>   not   fathers-NOM-their<sub>MAS</sub>

- (12) a.    ʒiʔ-na            hunna        wa    ʔabaaʔ-u-hunna  
              came-3plfem    they<sub>FEM</sub>   and   fathers-NOM-their<sub>FEM</sub>  
              “They and their fathers came.”

- b.    \*ʒaaʔa-t            hunna        wa    ʔabaaʔ-u-hunna  
              came-3sgfem    they<sub>FEM</sub>   and   fathers-NOM-their<sub>FEM</sub>

If the null expletive analysis were correct, it is not clear why (11b) and (12b) would be ungrammatical: The verb is in its third person singular form, while showing gender agreement with the postverbal pronominal. There are probably two ways to account

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<sup>6</sup> Notice also that while expletives are typically associated with a definiteness requirement, this is completely lacking in VS orders, which allow either a definite or indefinite nominal in postverbal position. To accommodate this fact, we have to associate the definiteness requirement, not with the presence of an expletive, but with the overtness of that expletive, perhaps along the lines in Burzio (1986).

<sup>7</sup> The latter case is what is referred to in the literature as *first conjunct agreement*. I will discuss this in detail later in this section.

for this fact under the null expletive analysis: One solution is to assume that in such structures there is no null expletive, which would add to the ad hoc construction-specific nature of the analysis. The other solution is to assume that there is still a null expletive in such structures, but that the feature transmission process that takes place between the null expletive and a postverbal pronominal has to extend to all features, which means that the feature transmission process has to be sensitive to whether the postverbal subject is a lexical DP or a pronominal. We can probably appreciate the complexity of the null expletive analysis if we sum it up, say along the following lines: *“In VS structures, the verb appears with third person singular agreement as a reflex of a Spec-head relation with a null expletive that is uniformly third person singular. The null expletive, being underspecified for gender, has to engage in a grammatical relation with a postverbal nominal to acquire a gender feature, say via feature transmission, which then shows on the verb. Crucially, however, if the postverbal nominal is a pronominal, feature transmission extends to all features.”* This is an obviously complex analysis.

Finally, notice also that some Arabic dialects do not exhibit the SVAA, even though all these dialects are still null subject languages. In these dialects, we have to assume that null expletives do not exist (despite the fact that they have overt expletives), or that they exist but for some reason are inactive in the grammar.

On the basis of these conceptual, technical, and empirical problems associated with a null expletive analysis, I conclude here that such an analysis is flawed.

Similarly, the mechanism of agreement loss proposed by Aoun *et al* (1994) is minimalistically suspect for the simple reason that it does not appear to be attested in

other constructions in this same language or in other languages. Realizing the *ad hoc* nature of agreement loss, Aoun *et al* discuss some evidence from an English dialect cited by Kayne (1989), where they argue that some agreement loss mechanism must be involved. Consider the following examples from this English dialect:

- (13) a. the people who Clark think are in the garden  
b. the people whose cars John think are beautiful

According to Kayne, absence of third person singular agreement within the relative clauses in (13) is due to movement of the Agr head to C, where it agrees with the wh-operator in SpecCP, which is plural. Even if this analysis is correct, it is not clear how it bears on the issue of agreement loss (cf. Harbert and Bahloul 2002). Under Kayne's analysis, (13) seems to be a case of agreement overriding, rather than mere agreement loss: An element agrees first with a singular XP in its Spec, but then, due to movement, ends up in another position, where it agrees again with another element in another Spec, which happens to be plural this time. Even though this involves agreement loss of previously acquired agreement features, it mainly takes place due to the presence of another agreement relationship established at a later point during the derivation. In the VS structures in SA, verb raising does not take the verb to a projection where another agreement relationship is established.<sup>8</sup> Under Aoun *et al*'s analysis, the agreement is just lost, by sheer stipulation. The facts in (13), therefore, do not seem to bear on the issue of the legitimacy of an operation of agreement loss in natural language grammar due to mere verb raising.

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<sup>8</sup> Aoun *et al* strictly reject the presence of a null expletive in VS orders.



On the other hand, a serious empirical problem with the Spec-head approach arises with VS constructions where agreement obtains not with the whole postverbal subject, but with an element embedded within that subject. This is the case of the so-called *first conjunct agreement* (FCA, henceforward) constructions, illustrated below by data from SA:

- (14) a.    ʒaaʔa            Zayd-un        wa    Hind-u  
               came-3sgmas   Zayd-NOM   and   Hind-NOM
- b.    ʒaaʔa-t        Hind-u        wa    Zayd-un  
               came-3sgfem   Hind-NOM   and   Zayd-NOM
- c.    \*ʒaaʔaa        Zayd-un        wa    Hind-u  
               came-3dumas   Zayd-NOM   and   Hind-NOM

As the data in (14) show, if the postverbal subject is a conjoined phrase, partial (i.e., gender) agreement always obtains with the first conjunct: If the first conjunct is masculine, no gender morphology appears on the verb (14a); if the first conjunct is feminine, the *-t* marker of femininity surfaces on the verb (14b). (14c) shows that full agreement with the whole conjoined subject is not allowed. Even if one assumes that the postverbal conjoined subject is in a Spec-head relation with I at one point in the course of the derivation (say, following Aoun *et al*), there is no way for that analysis to explain to us how the verb surfaces with the gender feature of the first conjunct, rather than with the gender feature of the whole conjoined phrase. Clearly, the Spec-head approach to agreement faces a serious problem accounting for FCA facts.

One way to save the Spec-head approach is to assume that FCA is actually the result of reduction in a coordination structure (though with some extra nontrivial

ancillary assumptions), as Aoun *et al* propose. Since FCA is the subject of a separate section in this chapter, I will postpone a full discussion of the issue till then, noting in passing that there is good empirical evidence against such a coordination reduction analysis of FCA for SA, and, consequently, against a Spec-head approach in general (cf. Section 2.7).

Based on the discussion in this section, I conclude that there are considerable conceptual and empirical problems with the Spec-head analysis of the SVAA in SA, whether in terms of positing a null expletive in VS structures, or positing an operation of agreement loss in the derivation of VS word orders.

### **2.1.2 The incorporation analysis**

Another analysis of the SVAA simply attributes the asymmetry to the nature of the subject involved: In VS orders the subject is a lexical DP, hence no agreement on the verb is required; in SV orders, by contrast, the subject is actually an incorporated pronominal cliticized onto the verb. Under this analysis, agreement morphology is assumed to function as an argument of the verb, which is a reasonable approach to agreement, since in many languages agreement affixes are, in fact, grammaticalized morphemes that, diachronically, evolved out of overt pronominals. Under this approach, the SVAA follows because lexical subjects and incorporated pronominals are in complementary distribution in postverbal position. This is the approach adopted by medieval Arabic traditional grammarians. In the generative literature, versions of the incorporation analysis have been proposed in Fassi Fehri 1993 and Demirdache (to appear).

As will be discussed later in this chapter, there is strong empirical evidence that the VS and SV orders should be associated with two different syntactic representations. Since the incorporation analysis assumes this to be the case, it seems to be on the right track. I will diverge from the incorporation analysis, however in treating morphological endings as pure agreement markers rather than argumental categories. Instead, I will argue later in this chapter that the subject in SV orders is uniformly the null element *pro*. One virtue of such an approach is that it avoids the problem that the incorporation analysis faces with regard to gender agreement morphology. Crucially, under such an analysis, gender morphology cannot be an incorporated pronominal, or it will not be possible for it to co-occur with a postverbal DP subject, which it does. One has to assume that gender morphology by itself is defective enough not to function as an incorporated pronominal. While any analysis of the SVAA in SA has to say something special about gender agreement, it is clear that the incorporation analysis has to make a fundamental distinction between morphological markers that may function as incorporated subjects, and those that cannot. If the subject, however, is assumed to be uniformly *pro* in such structures, the distinctive behavior of gender can be made to follow from something else.

In his discussion of the incorporation analysis, Benmamoun (2000) points out that this analysis also faces a problem with compound tense constructions (CTCs), where overt agreement is manifest on both the auxiliary as well as the main verb in SV structures, as shown in (15) below:

- (15)   ʔal-ʔawlaad-u   kaan-uu       yalʔab-uuna   fii   ʔal-ħadiiqat-i  
          the-boys-NOM   were-3plmas   play-3plmas   in   the-garden-DAT  
          “The boys were playing in the garden.”

As it turns out, structures such as (15) can be indeed compatible with the incorporation analysis, if we assume that there are two TPs in such constructions, hence two subjects. This biclausal analysis of CTCs has in fact been proposed for SA by Fassi Fehri (1993) and for Moroccan Arabic by Ouali and Fortin (to appear). There is strong empirical evidence that in such structures there are actually two distinct TPs, not just because of the presence of multiple agreement in CTCs, but also due to the fact that the main verb can appear in its tensed form, as in (16) below:

- (16)   kaana               ʔal-ʔawlaad-u   qad   raħal-uu  
          was-3sgmas   the-boys-NOM   PCL   left-3sgpl  
          “The boys had already left (e.g., when we arrived).”

The tensed morphology on the two verbs *kaana* and *raħal-uu* clearly provides evidence in support of the assumption that there are two distinct TPs in such constructions. Later in this chapter, I will argue that a bi-TP analysis coupled with the proposed analysis for the SVAA to be presented in this thesis will also explain to us why multiple agreement obtains in CTCs.

In sum, while the analysis to be presented later in this chapter diverges from the incorporation analysis with regard to the status of the subject in SV orders, it still shares the underlying assumption that both words orders are derived from two different syntactic representations. In that sense, both analyses may in fact be considered two variations on the same theme.

### 2.1.3 The subject-verb merger analysis

Realizing the problems with the previous analyses, Benmamoun (2000) proposes an alternative analysis whereby the asymmetry is accounted for in terms of morphological merger in the post-syntactic component. The main idea here is that number can be spelled-out affixally or periphrastically, in the same way tense is in other languages, e.g., French. In particular, in VS orders, both the verb and subject merge, and it is this merged subject that periphrastically spells-out the number feature on the verb, thereby explaining its absence in the verb morphology. In SV orders, by contrast, no such merger between the subject and verb takes place, hence the need for affixal number to be manifest on the verb.

One technical problem with the implementation of this analysis is that it requires adjacency between subject and verb in VS orders for morphological merger to take place, which is not required on surface structure, though. Adverbials PPs and shifted objects for example, can intervene between subject and verb, as in (17):

- (17) a.   ħaDara           bi-l-ʔams   Zayd-un  
          came3sgmas   yesterday   Zayd-NOM  
          “Zayd came yesterday.”
- b.   qaraʔa           ʔal-kitaab-a   Zayd-un  
          read 3sgmas   the-book       Zayd-NOM  
          “Zayd read the book.”

For Benmamoun’s analysis to work, he has to assume a loose definition of adjacency. Specifically, as long as the subject is adjacent to the verb or a copy of the verb, merger can take place. Such a move requires assuming that the morphological component can actually treat phonologically empty materials as possible merger

targets. Another problem then arises with SV orders, where adjacency between subject and verb occurs, but post-syntactic merger crucially does not take place. For this, Benmamoun has to stipulate that the postverbal copy of the subject cannot engage in the verb-subject post-syntactic merger, so the number feature is forced to be spelled-out by an affix instead.

The subject-verb merger analysis also faces an empirical problem with the previously mentioned VS constructions where the postverbal subject is a pronominal or includes a pronominal as a first conjunct (cf. the examples in (11-12)). In such cases, the number feature on the verb has to be that of the pronominal first conjunct. But this can only mean that we have a case where a postverbal subject should not be allowed to merge with the verb; if it does, we predict third person singular agreement, contrary to fact.

On more universalist grounds, it is not clear if we can generalize this analysis to subjects in other languages as well, which renders the analysis rather language-particular. Recall that modern Arabic dialects like Moroccan and Lebanese do not show the SVAA, hence Benmamoun has to assume that this verb-subject merger is not an option in these languages. Notice, incidentally, that this proposal is the reverse of the incorporation analysis: Under the incorporation approach, the agreement morpheme is posited as the subject; under Benmamoun's analysis, the subject is posited as the (number) agreement morpheme.

To sum up the discussion in this section, there are various problems in any analysis of the SVAA in SA in terms of Spec-head agreement, pronominal incorporation, or verb-subject post-syntactic merger. Consequently, an alternative

analysis is still needed. Before I offer such an analysis, however, I spend the next section discussing further data relevant to the SVAA, which will eventually force us to posit a fundamental distinction in the derivation of VS as opposed to SV orders.

## **2.2 SV and VS structures are not “transformationally” related**

As it turns out, there is strong empirical evidence that SV orders differ in several respects from their corresponding VS orders in their semantic, syntactic as well as Case properties. I discuss these in this section.

### **2.2.1 VS and SV structures are semantically distinct**

Semantically, SV orders have always been traditionally taken to represent *topic-comment* structures, involving what is sometimes called a “categorical” interpretation, whereby the preverbal DP is interpreted as topic of the discourse against which the event is presented, whereas their corresponding VS orders are assumed to denote the (default/unmarked) “thetic” interpretation, whereby an event is neutrally reported with the participants involved.<sup>9</sup> In fact, Arab grammarians never treated the preverbal DP in SV orders as subject, calling instead *mubtadaʿ* (roughly topic) and the rest of clause *xabar* (roughly comment). The information structure for both word orders is therefore not the same. The “topical” nature of the preverbal DP is supported by the fact that indefinite nonspecific NPs cannot occur preverbally in SA, as the ungrammaticality of (18a) below indicates (cf. Fassi Fehri 1993, Demirdache (to appear)):

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<sup>9</sup> The thetic-categorical distinction is a traditional grammar idea that has been first revived within generative grammar in Kuroda (1972). Other research in generative syntax that has made use of this distinction includes Raposo and Uriagereka (1995), and Basilico (1998), among others.

- (18) a. \*walad-un kasara l-baab-a  
 boy-NOM broke 3sgmas the-door-ACC
- b. kasara walad-un l-baab-a  
 broke 3sgmas boy-NOM the-door-ACC  
 “A boy broke the door.”

Recall that this is also a property of *left-dislocation* (LD, henceforward) structures in this language:<sup>10</sup>

- (19) a. ?al-kitaab-u qara?a-hu Zayd-un  
 the-book-NOM read 3sgmas-it Zayd-NOM  
 “The book, Zayd read it.”
- b. \*kitaab-un qara?a-hu Zayd-un  
 book-NOM read 3sgmas-it Zayd-NOM

This topic-like property of preverbal DPs in SV structures suggests that such DPs are actually in a left-peripheral position in the sentence on par with LD-ed elements in the language in general.<sup>11</sup> If, however, the SV order is derived via movement, we have to

<sup>10</sup> Aoun and Benmamoun (1998) describe structures like (19a) as instances of Clitic Left-Dislocation (CLLD). This might not be quite accurate if CLLD is understood as it was first discussed in Cinque (1977, 1983). Instead, SA constructions seem to exhibit the syntactic properties of what is often called Hanging Topic Left Dislocation (HTLD). For a full discussion of the differences between these two types of structures, see Grohmann (2000) and Villalba (2000). In this thesis, I will simply use the more general term Left Dislocation for such structures, under the understanding that they are HTLD, not CLLD.

<sup>11</sup> LD might still be accounted for in terms of movement rather than base-generation, with the resumptive pronoun in such structures being a spell-out of the trace of the moved DP. That resumption might be the residue of movement has been argued for in Aoun *et al* (2001), and in Boeckx (2003a). In this thesis, I will assume, however, a non-movement analysis of resumption, along the lines suggested in McCloskey (Undated). There are two reasons for that: First, because resumption does occur within islands, and second, perhaps more importantly, because there are asymmetries in SA between sentences that have overt resumption and those where a gap is left in the resumption site. Occurrence of resumptive pronouns within islands has been argued, however, to be still compatible with a movement analysis, if it is understood as a way to repair island violations, with reconstruction effects being absent if the movement involved is induced under Match, not Agree, as argued in Boeckx’s work and in Boeckx and Grohmann (2005). It remains, however, to explain why resumption appears in non-islands, where no repair is needed. An instance of the gap-resumption asymmetrical behavior in SA is given in the next subsection with regard to wh-



stipulate the indefinite NPs cannot undergo that movement when they have a nonspecific existential interpretation.<sup>12</sup>

### 2.2.2 Intervention effects with A'-movement

VS and SV orders also differ with regard to their interaction with wh-movement: while extraction across a postverbal DP is nonproblematic, extraction across preverbal DPs is typically disallowed (cf. Fassi Fehri 1993), as the contrast between (20a) and (20b) shows:

- (20) a. man Daraba Zayd-un  
           who hit 3sgmas Zayd-NOM  
           ‘Who did Zayd hit?’
- b. \*man Zayd-un Daraba  
           who Zayd-NOM hit 3sgmas  
           ‘Who did Zayd hit?’

The ungrammaticality of (20b) can be explained if the preverbal DP in this language is assumed to occupy an A'-position, thus blocking wh-movement under standard minimality assumptions.<sup>13</sup> Interestingly, if a resumptive pronoun occurs in object

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extraction. It is my contention here that, since such asymmetries exist, traces and resumptive pronouns cannot be one and the same thing, at least in these particular structures. In Chapter 6, I will speculate on another source of resumption than movement.

<sup>12</sup> Alexiadou and Anagnostopoulou (1998) observe the same definiteness effects with preverbal subjects in Greek. One test they use to show the specificity of the preverbal NP is Relative Clause Extraposition. Under the Specificity Condition of Fiengo and Higginbotham (1981), we should expect extraposition to be blocked if the head of the relative clause is a definite NP, though not if it's indefinite:

- (i) A man came that wanted to talk to you.  
 (ii) The man came that wanted to talk to you.

The same seems to hold with indefinite NPs in SA, where relative clause extraposition leads to marginality, as we should expect if the preverbal position is associated with specificity:

- (iii) ??walad-un kasara l-baab-a yaʕrif-u axaa-ka  
           boy-NOM broke 3sgmas the-door-ACC know-sgmas brother-your  
           ‘A boy that knows your brother broke the door.’

<sup>13</sup> That SpecIP may parametrically be an A'-position has been independently argued for by Mahajan (1990) for Hindi and Borer for Modern Hebrew (1995).

position, hence signaling absence of a movement operation in the structure, the order “Wh DP V” becomes possible, assuming that minimality is a condition on movement operations only, hence violated in (20b), but not in (21):

- (21)      man    Zayd-un      Daraba-*hu*  
               who    Zayd-NOM   hit 3sgmas-him  
               “Who did Zayd hit (him)?”

Wh-extraction facts thus provide evidence that the preverbal DP in SV orders occupies an A'-position in the sentence, rather than arriving there via A-movement from within the thematic domain. I also take the contrast between (20b) and (21) to indicate that resumption cannot be the result of spelling-out a trace in these instances. If it were so, then we have no explanation for why this grammaticality contrast should exist.<sup>14</sup>

### 2.2.3 Case properties of post- and preverbal DPs

In addition to the semantic and extraction evidence above for the A'-status of the position of the preverbal DP in SV structures in SA, the Case properties of post- and preverbal DPs seem to point in the same direction. Postverbal DPs uniformly appear with nominative case, whereas preverbal DPs appear with nominative case only in absence of an available Case assigner (e.g., an overt C of the *ʔinna*-type, or the matrix verb in a raising-to-object construction). Consider the following data:

- (22) a.    qaraʔa                      ʔal-ʔawlaad-u    ʔal-dars-a  
               read 3sgmas        the-boys-NOM    the-lesson-ACC  
               “The boys read the lesson.”

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<sup>14</sup> One can make a distinction between resumptive pronouns in these cases and those where they are spelled-out traces. Apart from accounting for the observed asymmetries, there seems to be little evidence that resumption in sentences like (21) is different from other instances of resumption in the language, however.

- b.    ʔal-ʔawlaad-u    qaraʔ-uu           ʔal-dars-a  
          the-boys-NOM   read 3plmas       the-lesson-ACC  
          “The boys read the lesson.”
- (23) a.   ʔinna   l-ʔawlaad-a       qaraʔ-uu       ʔal-dars-a  
          C       the-boys-ACC   read 3plmas   the-lesson-ACC  
          “I affirm that the boys read the lesson.”
- b.    ǧanna-a           Zayd-un       ʔal-ʔawlaad-a   raḥal-uu  
          believed.3sgmas   Zayd-NOM   the-boys-ACC   left-3plmas  
          “Zayd believed the boys to have left.”

The two sentences in (22a,b) show that both postverbal and preverbal DPs appear with nominative Case. What (23) shows, however, is that this is not always the case with preverbal DPs, since that DP obligatorily surfaces with (what is morphologically identical to) accusative case when preceded by a C of the *ʔinna*-type (23a), or if it is in the case-assignment domain of a raising-to-object matrix verb as in (23b).<sup>15</sup> These Case facts show that the nominative case appearing on preverbal and postverbal DPs is not the same: Nominative case assigned to postverbal DPs is structural, whereas nominative case appearing on preverbal DPs is actually the default case typically assigned to topics in this language in absence of any available lexical or structural Case assigner. That nominative is a default case in SA has been proposed by several researchers (see, for example, Mohamed 1990, 2000; Ouhalla 1994). The assumption also gains support from the Case properties of topic-comment constructions where no overt copula verb occurs. In such structures, the topic (and also the predicate if nominal or adjectival) appears with nominative case:

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<sup>15</sup> Raising-to-object constructions are discussed in detail in Chapter 4 of this thesis.

- (24) a. Zayd-un      fii-ʔal-dar-i  
           Zayd-NOM   in-the-house-DAT  
           “Zayd is in the house.”
- b. Zayd-un      muʕallim-un  
           Zayd-NOM   teacher-NOM  
           “Zayd is a teacher.”
- c. Zayd-un      saʕiid-un  
           Zayd-NOM   happy-NOM  
           “Zayd is happy.”

To sum up this section, if preverbal DPs are the result of A-movement, then we face two problems: First, how to motivate such movement, given that DPs can be assigned Case in situ; and second, should we allow this movement, we need a mechanism of Case overwriting, whereby the nominative case assigned earlier gets overwritten by the accusative case assigned later by the complementizer or the raising-to-object verb. Both are undesirable assumptions, given the theory of grammar assumed here.

#### 2.2.4 Idioms

In addition, the behavior of sentential idioms in SA also provides suggestive evidence that SV orders are the result of base-generation rather than movement. Under standard assumptions, an idiom can retain its idiomatic reading even after raising:

- (25) a. The cat is out of the bag.                      (both literal and idiomatic readings)  
       b. The cat seems to be out of the bag.      (both literal and idiomatic readings)  
       c. The cat, it seems that it is out of the bag. (only literal reading)

There is good evidence from SA that idiomatic readings are not available in L(eft) D(islocation) structures, as (26b) shows, where no idiomatic reading is possible, and the literal reading is unnatural, due to the metaphoric nature of the idiom:

- (26) a. saḥab-tu      ʔal-busaaT-a      min      taḥt      qadamay-hi  
              pulled.1sg      the-rug-ACC      from      under      feeT-DAT-his  
              Literal and Idiomatic: “I pulled the rug from under his feet.”
- b. ʔal-busaaT-u      saḥab-tu-hu      min      taḥt      qadamay-hi  
              the-rug-NOM      pulled-1sg-it      from      under      feeT-DAT-his  
              Literal reading only: “I pulled the rug from under his feet.”

We see a similar pattern in the Egyptian Arabic idiom “*dabaḥ ʔel-oTTa*” (= slaughter the cat), which has both literal and idiomatic meanings:

- (27) a. ʔanaa      dabaḥ-t      ʔel-oTTa  
              I      slaughter-1sg      the-cat  
              Literally: “I slaughtered the cat.”  
              Idiomatically: “I made a statement.”
- b. ʔel-oTTa      ʔanaa      dabaḥ-t-haa  
              the-cat      I      slaughter-1sg-it  
              “The cat, I slaughtered it.”      (no idiomatic reading available here)

The generalization might be that while movement chains maintain the idiomaticity of an idiom, co-indexation chains do not (cf. Aoun and Benmamoun 1998).

Now, consider the following sentential idioms in SA:

- (28) a. sabaqa      ʔas-sayf-u      ʔal-ʔaḏl-a  
              preceded 3sgmas      the-sword-NOM      the-censure-ACC  
              Literal: “The sword preceded the censure.”  
              Idiomatic: “It is too late to do anything.”

- b.   ʔas-sayf-u                   sabaqa                   ʔal-ʕaḏl-a  
       the-sword-NOM   preceded 3sgmas   the-censure-ACC  
       No literal reading, and structure sounds unnatural on the  
       idiomatic reading.

- (29) a.   faaDa                   ʔal-kayl-u  
       overflowed 3sgmas   the-holding capacity-NOM  
       Literal: “This exceeded the holding capacity.”  
       Idiomatic: “I am fed up.”

- b.   ʔal-kayl-u                   faaDa  
       the-holding capacity-NOM   overflowed 3sgmas  
       Literal reading is possible, but structure sounds unnatural on the  
       idiomatic reading.

Sentential idioms in SA like those in (28) and (29) seem to occur invariably in the VS order.<sup>16</sup> This would follow if the VS order is the only structure in which idioms are in the same domain of interpretation. Occurrence of these idioms in the SV order typically sounds unnatural. That would be surprising if SV orders are derived via movement; if, however, SV structures are base-generated as such, one can argue that the unnaturalness of the idiomatic readings may follow from the fact that one part of the idiom is not within the same interpretation domain as the rest of the idiom. If, by contrast, SV orders are derived from VS orders via movement, the markedness of the idiomatic readings in the (b) sentences in (28) and (29) is puzzling.<sup>17</sup>

<sup>16</sup> A google search for the idiom in (28) returned more than 21,000 hits for the idiom in the VS order, and only 192 in the SV order. Among those last were the SV idiom was mentioned in the context of correction, i.e., telling the reader not to use it in the SV order.

<sup>17</sup> It remains to explain why one can still force the idiomatic reading in the some of these SV orders. I suspect that in these cases a marked process of interpretation would widen the interpretation domain to include materials adjacent to the domain. The markedness of the operation is reflected in the unnaturalness of the idiomatic reading in this case. But this is a mere speculation. Notice further that in languages like English some idioms are assumed to be “transformationally” deficient, i.e., they do

### 2.2.5 Overt resumption

A further piece of evidence that SV orders are actually the result of base-generated LD structure comes from the fact that the resumptive pronoun in postverbal position under certain conditions is forced to appear overtly. One such case is predicates whose Experiencer arguments are PPs. An example of such predicates is the deontic modality verb *yaʒibu*:<sup>18</sup>

- (30)    *yaʒib-u*            *ʔala*    *Zayd-in*        *ʔal-rahiil-u*  
          must-3sgmas    on    Zayd-DAT    the-leaving-NOM  
          “Zayd has to leave.”

If we want the Experiencer DP “Zayd” to appear preverbally, an overt resumptive pronoun has to appear cliticized onto the preposition within the PP:

- (31)    *Zayd-un*        *yaʒib-u*            *ʔalay-hi*    *ʔal-rahiil-u*  
          Zayd-NOM    must-3sgmas    on-him    the-leaving-NOM  
          “Zayd, he has to leave.”

The sentence in (31) is typically treated as a LD structure, where a resumptive pronoun in the thematic domain is associated with a peripheral DP. One reason is that the resumption site can be within an island. I illustrate here with the Complex NP island (as in (31') below):

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not maintain their idiomatic reading after movement takes place, e.g., “*The bucket was kicked*,” has only a literal meaning, not the idiomatic reading that someone died. One may argue, therefore, that the SA idioms mentioned above are also transformationally deficient. It would be very odd, however, if all idioms in the language, or at least most of them, have this deficiency. If SV orders, by contrast, are LD structures as argued here, the oddness of the idiomatic reading in these cases follows from the topical nature of the preverbal DP, hence rendering the idiomatic reading implausible. This is the case, for example, in the English statement “*The bag, the cat is out of it*,” which has no idiomatic interpretation.

<sup>18</sup> Notice that in (30) and (31) the verb agrees and assigns nominative case to the Theme DP. I will discuss such cases of nominative Themes in Chapter 2 in detail.

- (31')    Zayd-un        yaʒib-u                    ʔalaa    ʔal-marʔat-i        ʔallatii  
              Zayd-NOM   must-3sgmas            on        the-woman-DAT   who.fem  
              maʔa-**hu**        r-raḥiil-u  
              with-him        the-leaving-NOM  
              “Zayd, it is necessary for the whoman that is with him to go.”

If SV orders are derived via movement, then we have to make an exception for sentences with predicates of deontic modality since they involve LD. If all SV word orders are, by contrast, treated as LD structures, then the behavior of deontic modality verbs is not surprising.

## 2.2.6 Resumption within coordinate structure islands

A similar resumption pattern arises in case the postverbal DP is a coordinate structure island. In this case, the preverbal DP has to be resumed by a pronoun within the coordinate phrase:

- (32) a.    ḥaDara        Zayd-un        wa        ʔaliyy-un  
              came 3sgmas   Zayd-NOM    and        Ali  
              “Zayd and Ali came.”  
       b.    Zayd-un        ḥaDara        **huwwa**    wa        ʔaliyy-un  
              Zayd-NOM    came 3sgmas   he        and        Ali  
              “Zayd, he and Ali came.”

This is again a LD structure, since the preverbal DP could not have moved out of the coordinate structure island. I will get back to the question of why the resumptive pronoun has to be overt in cases like (31) and (32b) later in the discussion. Note that this is a general property of LD structures, where the LD-ed DP can be associated with a resumptive pronoun inside an island. While it is hard to do that for most islands with subjects, it is easy to see that when the preverbal DP is associated with a



non-subject position. Below are examples of resumption inside Complex NP and adjunct islands for nonsubjects:

- (33) a. Zayd-un      ḥaDara      [ʔal-raʒul-u      ʔallaǧii      yaʔrif-hu]  
                  Zayd-NOM    came 3sgmas    the-man-NOM    who      know.3sgmas.him  
                  “Zayd, the man who knows him came.”
- b.    Zayd-un      saafar-tu      [qabla    ʔan    ʔuqaabila-hu]  
                  Zayd-NOM    traveled.1sg    before    C      meet.1sg.him  
                  “Zayd, the man who knows him came.”

Since the standard analysis for these cases is LD, we should, in principle, expect the same analysis to extend to cases where the preverbal DP is associated with a resumptive pronoun within an island in subject position, as in (32b). This has the virtue of unifying cases of LD of subjects and nonsubjects under the same analysis.

Summarizing the discussion on the status of preverbal DPs in SV orders in SA, there seems to be good empirical evidence in favor of the following descriptive generalization:

- (34) While postverbal DPs are uncontroversially subjects, preverbal DPs exhibit the semantic and syntactic properties typically associated with topics/left dislocated elements.

To conclude this section, the set of semantic and syntactic properties associated with the SV word order points in the direction of an analysis of these structures not in terms of A-movement as some of the earlier analyses have proposed, but rather in terms of base-generation of preverbal DPs in their surface (A'-)position. In the next section I provide explicit structural representations for both word orders

and I will use this structural difference to derive the SVAA from interface conditions on structural representations.

### 2.3 The SVAA revisited: A base-generation analysis

One relevant fact about subject-verb agreement in SA which has been mentioned earlier is the lack of asymmetry in agreement with pronominal subjects, whether these pronominals are null (which is the unmarked case) or overt, and whether these pronominals precede or follow the verb:<sup>19</sup>

- (35) a. (hum) qaraʔ-uu ʔal-dars-a ✓SV+full agreement  
           they read 3plmas the-lesson-ACC
- b. qaraʔ-uu (hum-u) ʔal-dars-a ✓VS+full agreement  
           read 3plmas they-EV the-lesson-ACC
- c. \*qaraʔa hum-u ʔal-dars-a \*VS+partial agreement  
           read 3sgmas they-EV the-lesson-ACC

Notice here that since SA is a null subject language, overtness of the pronominal subject is a marked option and is always associated with emphasis/contrastive focus effects. Similarly, if the first conjunct in a conjoined subject is pronominal, full agreement with that pronominal shows up on the verb in the VS order:

- (36) a. ʒiʔ-tu ʔanaa wa Hind-u  
           came-1sg I and Hind-NOM  
           “Hind and I came.”
- b. ʒiʔ-na hunna wa ʔabaaʔ-u-hunna  
           came-3plfem they<sub>FEM</sub> and fathers-NOM-their<sub>FEM</sub>  
           “‘They and their fathers came.”

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<sup>19</sup> EV = epenthetic vowel.

Unlike the case with non-conjoined pronominal subjects, overtness of the pronominal here is obligatory, as the ungrammaticality of the sentences in (37) show, and does not correlate with any semantic effects:

- (37) a. \*ʒiʔ-tu     *pro*   wa   Hind-u  
               came-1sg                and   Hind-NOM
- b. \*ʒiʔ-nna        *pro*   wa   ʔabaaʔ-u-hun  
               came-3plfem                and   fathers-NOM-their<sub>FEM</sub>

These facts of agreement with pronominal subjects thus seem to point to the descriptive generalization in (38):

- (38) Full agreement is always required when the subject is (or includes as a first conjunct) a pronominal, whether that pronominal is overt or null, and whether it occurs in pre- or postverbal position.

It seems, then, that the following two generalizations hold: (a) full agreement is always required if the subject is a pronominal, and (b) the preverbal DP in SV structures does not get there via movement. Any analysis of the SVAA has to account for both of these generalizations. In this section I would like to argue for an analysis that captures the two descriptive generalizations in (34) and (38) by positing two different underlying structures for SV and VS orders in SA. As a point of departure, I will assume that the descriptive generalization in (38) can actually be used as a diagnostic for the presence of a pronominal subject. In other words, from the fact that full agreement is always required with pronominal subjects, I will assume that presence of full agreement is indicative of the presence of a pronominal subject. In

more precise terms, I would like to assign the following structural representations to VS and SV orders:

(39) VS:  $[_{TP} T+[_{v^*+V}] [_{v^*P} DP \ t_{v^*} [_{VP} t_V \ YP]]]$

(40) SV:  $[_{TP} DP \ T+[_{v^*+V}] [_{v^*P} \textit{pro} \ t_{v^*} [_{VP} t_V \ YP]]]$

In (39), the lexical DP, base-generated in Spec $v^*P$ , remains in situ, with the VS order resulting from verb movement to  $v^*$  to T. In SV structures, by contrast, the  $v^*P$ -internal subject position is actually occupied by a null subject *pro*, with the preverbal DP base-generated in its surface position in SpecTP.<sup>20</sup> This preverbal DP will be interpreted as coreferential with the *pro* in postverbal subject position in the same way a LD-ed DP is interpreted as coreferential with a resumptive pronoun within the thematic domain.<sup>21</sup> The representations in (39) and (40) do derive the word order, but of course the main question here is: Can they account for the agreement asymmetry?

In fact, given the structural distinction between (39) and (40), a natural answer arises for this question: full agreement obtains in SV orders because of the presence of a pronominal subject, which is in essence the generalization in (38). Partial agreement in the VS order could be viewed then as the result of a default agreement morpheme on T in this language. We will get back to the gender agreement issue later on, though.

<sup>20</sup> For now, I will assume here that the preverbal DP is base-generated in SpecTP. As it will become obvious later in the discussion, left-dislocated DPs will be assumed to occupy any of several positions within the “periphery zone.” Cf. Section 2.6 for an elaborate discussion.

<sup>21</sup> An obvious question is what mechanism gives us the obligatory co-reference between the preverbal DP in LD structure and the associated resumptive pronoun. I will follow McCloskey (Non-dated) in assuming that the relation involves A'-binding, and that resumptive pronouns are base-generated rather than transformationally created, but are then interpreted as variables in the sense of Safir (1986), where a variable is an element whose most local binder occupies an A'-position. I will use the term co-indexation to refer to how LD-ed DPs relate to the resumption site. But see also fn. 11 for a different approach to resumption.

Still, we have not explained why full agreement is obligatory when the subject is pronominal, but not so when the subject a lexical DP. An answer to this question is readily available from one of the standard assumptions of *pro* theory: the so-called *pro identification requirement* (cf. Rizzi 1982, McCloskey 1986), which we can now reformulate as an interface condition (perhaps holding at PF):

- (41) A null element *pro* has to be identified at the interface, where identification is established by association with a complete  $\phi$ -complex.<sup>22</sup>

Given (41), the presence of full agreement in SV orders comes down to an interface requirement on the structure in (40): agreement has to be full or *pro* will not be identified. Since lexical DPs are not subject to an identification requirement, full agreement is not required for interface convergence, though it is by no means prohibited (cf. the data from MA in (3)); default agreement is therefore allowed.

Notice, however, that pronominal subjects may also appear overtly, in which case it is not clear if presence of full agreement on the verb is again required for interface convergence. Recall, though, that pronominals in subject position surface overtly in two contexts: for emphasis/contrastive focus effects or as the first conjunct in a conjoined subject. Suppose, then, that overtness of the pronominal in subject position is actually the result of an interface operation of lexicalization of a null subject *pro* rather than early insertion of a pronominal with phonological content.<sup>23</sup>

The assumption makes sense in light of the fact that null subject languages do not

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<sup>22</sup> I ignore here pro-drop languages of the Chinese-type, where agreement morphology is null, hence cannot serve as an identifier for *pro*. In such languages, *pro* identification has to proceed in a different fashion (see Huang 1984 for an elaborate discussion).

<sup>23</sup> Another solution is to assume, following Arabic traditional grammarians, that the overt pronominal in such cases is not the subject, but is merely an emphatic marker, the real subject being still a null element (or an incorporated pronominal). Under this assumption, obligatory overtness of  $\phi$ -agreement would be still tied to the presence of *pro*, as desired for the present analysis.

normally allow pronominal subjects to be overt. In fact, in some languages overtness of a pronominal is strictly prohibited, as McCloskey (1986: 251) argues is the case in Irish, illustrated here by the following examples:

- (42) a. cuirim            *pro*                      b. \*cuirim            mé  
           put (*PRES S1*)                                put (*PRES S1*)    I  
           “I put”

- (43) a. liom            *pro*                      b. \*liom            mé  
           with (S1)                                        with (S1)    I/me  
           “with me”

- (44) a. mo    theach   *pro*                      b. \*mo    theach   mé  
           S1    house                                        S1    house    I/me  
           “my house”

Interestingly, however, Irish allows overt pronominals to surface with the so-called *analytic* verb forms, i.e., those verb forms that inflect for tense, but not for person and number features:<sup>24</sup>

- (45)    cuireann        sibh  
           put (*PRES*)    you (PL)

McCloskey proposes that the contrast between the obligatory nullness of the pronominal subject in (42a) and the obligatory overtness of the pronominal subject in (45) may be explained in terms of “a requirement that the most highly-specified form available be inserted under zero-level categories at lexical insertion” (252). McCloskey’s insight can be readily captured under the present analysis: Given the condition on *pro* identification, analytic forms cannot license *pro*, hence the need to

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<sup>24</sup> Analytic forms contrast with “synthetic” forms, which do inflect for tense as well as person and number features. The verb form for “put” in (42a) is an example of synthetic verbal morphology in Irish.

fix the representation, or the derivation crashes. At it turns out, Irish forces lexicalization of the null subject in such cases. With synthetic verb forms, no such lexicalization is needed, since *pro* can be easily identified from the morphology on the verb or any other agreeing head (e.g., P or N). In essence, this supports the idea that pronominals in null subject languages start the derivation as *pro*, with lexicalization forced at the interface to save the derivation from crashing.

But obviously SA overt pronominals cannot be treated in the same way as those in Irish. SA simply has no synthetic-analytic morphological distinction for verb forms. Remember, however, that overt pronominals in such cases are associated with an emphatic interpretation. Suppose, then, that the overtness of the subject pronominal is actually related to this emphasis feature. In other words, suppose that the pronominal subject still starts as *pro*, and then gets lexicalized at the interface to save the derivation from crashing. After all, it is reasonable to assume that an emphasis feature on a null element is uninterpretable at PF. To be more precise, suppose that when *pro* carries a feature that cannot be realized on a null element, e.g., emphasis/focus, a rule of late insertion (such as the one in (46) below for the sentences in (35a,b)) Spells-out the pronominal  $\phi$ -complex overtly, otherwise *pro* will always remain “silent”:

(46) For *pro*<sub>[3plmas, +EMPHASIS]</sub>, insert “hum”.

In short, then, full agreement with overt pronominal subjects in SA is still compatible with the idea that rich agreement is tied to the presence of a *pro* in the structure, under the assumption that an overt pronoun is a lexicalized *pro*.

One more point is still in order. Recall that overt pronominals obligatorily surface in conjoined subjects as well, though in this case no semantic effects of emphasis/focus occur. How do we explain the obligatoriness of the pronominal in such cases then if we want to maintain the assumption that all pronominals in null subject languages start as the null element *pro*? As it turns out, there is a ready answer for that. Coordinate structures have always been assumed to be subject to a (little understood and unarticulated) condition of *parallelism*. It seems reasonable to assume that one case of parallelism is phonological: both conjuncts must have phonetic content. If this is the case, then lexicalization of a *pro* conjunct follows from the interface condition on the phonological parallelism of coordinate structure.<sup>25</sup>

In his discussion of first conjunct agreement in Irish, McCloskey states that “the leftmost element in a coordinate series ... may be *pro*,” which seems to contradict what we have just mentioned about the parallelism requirement on coordinate structures. As it turns out, in all the examples that McCloskey gives of conjoined phrases with *pro* as the first conjunct, a phonologically overt *féin* element (glossed as *EMPH*) always appears in that first conjunct, thereby suggesting that Irish has a language-particular element for fixing violations of the parallelism condition on coordinate structures (examples from McCloskey 1986: 254):

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<sup>25</sup> In fact, it could be that the classical *coordinate structure constraint* (CSC) is nothing but a violation of phonological parallelism, since after extraction; one of the two conjuncts is phonologically empty. That this is reasonable to assume is supported by two basic facts: First, across-the-board (ATB) extraction out of coordinate structures is legitimate; second, the CSC, unlike other island constraints, hardly seemed reducible to locality conditions such as Subjacency or in terms of a theory of barriers. Under the parallelism analysis, these two facts follow: ATB extraction preserves phonological parallelism (which would be lack of phonetic content in both conjuncts), whereas the nonreducibility of the CSC to locality principles is simply because the CSC is not a syntactic constraint; it is an interface condition. I will not pursue this idea here, though, and nothing in this thesis hinges on the exact status of the CSC.



- (47) a. Bhíos [NP *pro*-féin agus Eoghan] i láthair  
 Be (Past S1) (S1) EMPH and Owen present  
 “Owen and I were present.”
- b. liom [NP *pro*-féin agus Eoghan]  
 with (S1) (S1) EMPH and Owen  
 “with me and Owen”
- c. mo ghabháltas [NP *pro*-féin agus mo mháthar  
 S1 holding (S1) EMPH and my mother (GEN)  
 “my own and my mother’s holding”

A good piece of evidence that SV orders do in fact contain a null subject comes from contexts where this *pro* is forced to get lexicalized. One such case is within PPs, since SA Ps do not inflect for agreement. As a result, an overt pronominal appears encliticized onto the preposition. We have already seen one such example in sentences with verbs of deontic modality in Section 2.2.5. I repeat the example here, for convenience:

- (48) Zayd-un yaʒib-u ʔalay-**hi** ʔal-rahiil-u  
 Zayd-NOM must-3sgmas on-him the-leaving-NOM  
 “Zayd, he has to leave.”

Let us summarize the discussion in this section so far. SV orders in SA differ from VS orders in that the former contain a *pro* subject in the VP-internal subject position, associated with a preverbal DP, in the same way a LD-ed DP is related to a resumptive pronoun. Since *pro* is subject to an identification requirement, full agreement is always manifest to allow the derivation to converge at the interface. Lexical DPs, by contrast, need not be identified, hence the occurrence of either default agreement (SA) or full agreement (MA/LA) is possible in VS orders.

Pronominals in null subject languages start the derivation as *pro*,<sup>26</sup> which may get lexicalized if required by interface conditions, such as the requirement that emphasis/focus features be represented on a phonologically overt element, and the requirement that coordinate structures be parallel in their phonological content. If this analysis is correct, then the surface SVAA in SA can be explained in terms of the conditions imposed by the interface systems on structural representations, a result that seems in conformity with the strong minimalist thesis that language design is such that it satisfies bare output conditions.<sup>27</sup> It remains, however, to see if these results can be implemented within a minimalist framework. I turn to this next.

## 2.4 Standard Arabic SVAA in an Agree-based framework

Following Chomsky (2000, 2001a, 2001b, cf. Chapter 1 of this thesis), I assume here that agreement in natural language grammar is induced through the application of an operation *Agree*, which is a syntactic relation that takes place at a distance (rather than in a Spec-head configuration) within a local search domain. For the purposes of *Agree*, I will assume that T has the following inventory of uninterpretable features: First,  $\phi$ -features for Person and Number features, which may also happen to have *default* values.<sup>28</sup> Second, T also has a separate *CLASS* feature, which appears as a

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<sup>26</sup> Alternatively, pronominals are just D heads with  $\phi$ -features, which do not have to be spelled-out in null subject languages.

<sup>27</sup> A question arises as to how general this analysis is. Arguments that the preverbal DP in Romance has A'-properties are given in Zubizarreta (1992), Sola (1992), and Barbosa (1994). The same has been argued for Modern Greek by Alexiadou and Anagnostopoulou (1998). The analysis, as mentioned in the introduction, is more or less grounded in Jelinek's (1984) *pronominal argument hypothesis*, which Baker (1996, 2001) has argued can be used to account for word order in polysynthetic languages.

<sup>28</sup> Admittedly, the existence of default features is not non-problematic from a minimalist perspective, since, after all, what prevents us from always resorting to the default strategy to salvage deviant representations. But the presence of default agreement seems to be empirically motivated by phenomena where, instead of the regular agreement pattern, verbs appear instead with third person singular features. Milroy (1981) and Henry (1995) report a case of that kind in Belfast English,

Gender feature in many languages. If Gender is not part of the  $\phi$ -complex on T, then it should be able to probe separately for the purposes of Agree (see Ouhalla 2003 and 2005, for instance). Finally, T may appear with a peripheral feature (P-feature, from now on), which is the standard EPP feature, understood here as the requirement to be “an occurrence of something,” where an occurrence of  $\alpha$  is a sister of  $\alpha$  (Chomsky 2001b).<sup>29</sup> By assumption, then, T can appear with  $\phi$ , CLASS, EPP, or any combinations of these three, subject to lexical parameterization.

Given the above theoretical assumptions as well as the discussions in the previous sections, we now should be able to present explicit derivations for the SV and VS word orders in SA and the agreement pattern associated with each. For simplicity of presentation, suppose that our target SV string is “*DP V*” with full agreement surfacing on V. Given the analysis above, the structural representation of the sentence is as follows:<sup>30</sup>

$$(49) \quad [_{CP} C [_{TP} DP T_{EPP/\phi/CLASS} [_{v^*P} pro \ v^* [_{VP} V \ \dots ]]]]$$

In (49) Agree takes place between T and the  $v^*$ P-internal subject *pro*, thereby valuing the  $\phi$  and the CLASS features of T. The preverbal DP is base-generated in its surface position to satisfy the EPP feature on T. As noted earlier, agreement with a *pro*

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where forms such as “*The eggs is cracked*,” are acceptable. Technically speaking, I’m assuming here that default features are last resort, so only applicable when the syntax fails to license them. They can be coded as lexical features on particular heads (in this case, T), or they could be assigned in the morphological component to heads that fail to value their features during the derivation.

<sup>29</sup> In the discussion below I will use EPP when discussing syntactic derivations, and P-feature to talk about the semantic effects.

<sup>30</sup> Assume verb raising to  $v^*$  and T throughout, perhaps operations of the phonological component driven by the affixal properties of functional heads. Assume also an Agree relation between  $v^*$  and the object DP, whereby object-verb agreement and accusative case assignment obtain.

subject is only compatible with a full T, necessarily required so *pro* can be identified and the derivation converges at the interface.

Consider now the VS order. Here our target structure is “*V DP*” with partial gender agreement appearing on V. The structural representation of such a sentence is as in (50):

$$(50) \quad [_{CP} C [_{TP} T_{\text{DEFAULT/CLASS}} [_{v^*P} DP \ v^* [_{VP} \text{read the book}]]]]$$

$\begin{array}{c} \boxed{\text{Agree}} \uparrow \end{array}$

There are two main structural differences between (49) and (50): First, there is no *pro* in (50); rather, the  $v^*P$ -internal subject position is occupied by the lexical DP. Second, T has no  $\phi$  nor EPP features, as a lexical option for this particular dialect. CLASS, however, is an obligatory feature on T, hence the manifest gender agreement in VS as well as SV orders.

Notice, however, that in principle, we should expect a language where T can appear with both  $\phi$  as well as CLASS features in structures such as (50), a prediction that is borne out by the presence of Arabic dialects where full agreement does obtain in VS orders as noted earlier with regard to LA and MA. Such dialects will allow a T with both  $\phi$  and CLASS features without an EPP option:

$$(51) \quad [_{CP} C [_{TP} T_{\phi/\text{CLASS}} [_{v^*P} DP \ v^* [_{VP} \text{read the book}]]]]$$

$\begin{array}{c} \boxed{\text{Agree}} \uparrow \end{array}$

Under this analysis, the difference between SA on the one hand, and LA/MA on the other, has to do with the parametric properties of T in these varieties. SA, as noted

before, does not allow a  $\phi$ -complete T without an EPP feature. LA and MA, by contrast, seem to allow this option as a lexical property on T.<sup>31</sup>

## 2.5 Some empirical consequences of the Agree-based analysis of SVAA

The derivations presented in the previous section derive both SV and VS word orders as well as the agreement pattern associated with each. Word order is derived by whether or not there is a *pro* in the lexical array of a sentence, whereas the agreement pattern is derived by the “operating downward” Agree mechanism and the type of T selected. But at this point we should also wonder if the analysis can account for the range of empirical facts discussed earlier in this chapter. I discuss this in the present section.

One advantage of the current analysis is that we can now account for the definiteness/specificity requirement on preverbal DPs (cf. the data in (21)). Remember that in SA sentences of the form “*NP<sub>INDEFINITE</sub> V*” are ungrammatical on the nonspecific reading. Given the analysis presented here, this follows from the semantic effects of the EPP position that the preverbal DP occupies. In other words, a structure with a nonspecific NP in preverbal position conflicts with the inherent properties of the “periphery zone,” hence uninterpretable at the semantic interface, or perhaps converging as gibberish. The only way for an indefinite NP to receive a nonspecific interpretation is by Merging it directly in the *v*\*P-internal subject position, hence its exclusive appearance in postverbal position.<sup>32</sup>

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<sup>31</sup> It is not clear if we can derive this correlation between  $\phi$ -completeness and EPP from a deeper property of either T or the very little understood EPP. I am merely assuming here that it is a pure lexical property of T, which will differ, parametrically, from one language to another.

<sup>32</sup> See Diesing (1992) for a discussion of domains of interpretation in clause structure.

Now, consider the wh-extraction facts in (20), repeated here for convenience:

- (52) a. *man* Daraba Zayd-un  
           who hit 3sgmas Zayd-NOM  
           “Who did Zayd hit?”
- b. \**man* Zayd-un Daraba  
           who Zayd-NOM hit 3sgmas  
           “Who did Zayd hit?”

Recall that extraction is allowed across a postverbal DP (52a), but is prohibited across a preverbal DP (52b). Under the analysis presented here, that again follows from the assumption that the preverbal DP is base-generated in SpecTP, an A'-position in SA, by assumption (cf. fn.13), hence blocking wh-movement of *man* across the preverbal DP (53a), under standard minimality considerations (see the discussion of locality in Chapter 1). Wh-extraction across a DP in Specv\*P, by contrast, is unproblematic, since the postverbal DP is an A-position (53b):

- (53) a. [<sub>CP</sub> *man*<sub>i</sub> [<sub>TP</sub> DP T [<sub>t<sub>i</sub> v\*P</sub> pro V t<sub>i</sub>]]]
- 
- b. [<sub>CP</sub> *man*<sub>i</sub> [<sub>TP</sub> T [<sub>t<sub>i</sub> v\*P</sub> DP V t<sub>i</sub>]]]
- 

Next, let us reconsider the Case facts presented earlier in Section 2.2.3 (cf. the data in 22-23): postverbal DPs are always nominative; preverbal DPs are nominative only if there is no other case that could be assigned to them. Under the current analysis, postverbal DPs will always get nominative case by virtue of Agreeing with T, the locus of nominative case assignment under standard assumptions. Preverbal DPs, however, never start within the thematic domain, and never get into any Agree

relation with T, and therefore end up with default case (which happens to be nominative in SA), unless a lexical or structural Case-assigner is available in the structure, e.g., an overt C or a raising-to-object verb, in which case the base-generated preverbal DP will surface with non-nominative case, as shown in the diagrams in (54):<sup>33</sup>

- (54) a.  $[_{CP} \text{?inna} [_{TP} \text{DP T } [_{v^*P} \textit{pro} v^* [_{VP} \text{V} \dots ]]]]$   
| Case ↑
- b.  $[_{VP} \text{V} \dots [_{FP} \text{DP } [_{v^*P} \textit{pro} v^* [_{VP} \text{V} \dots ]]]]]$ <sup>34</sup>  
| Case ↑

Another advantage of the current proposal is that it does not force us to change our major assumptions about how agreement/Case-assignment and movement interact. Specifically, if the position of the preverbal DP in SV structures was derived by movement from the VP-internal subject position to SpecTP, a question that would remain unanswered is why such movement is needed if the DP can get nominative case in situ, as the grammaticality of VS structures in this language indicates. Even under a more lax theory where DPs can move after they get Case, a question would still remain why this “structural” nominative case ends up giving way to another case assigned by a lexical or structural Case-assigner. A mechanism of overwriting Case features, whereby a later assigned Case annuls an earlier assigned Case, seems *ad hoc* and non-economical. Under the current analysis, none of these questions arise: there

<sup>33</sup> Default case, like default agreement, is not an innocent assumption. But the presence of default case seems to be an empirical matter. Otherwise, we cannot explain why both subject and predicate appear with nominative case in sentences like (24), where no obvious Case-assigner is present. That said, we have to assume, again, that default case is a last resort mechanism used only when the syntax fails to assign case, but, crucially, not when case-assignment is blocked by grammatical principles. In other words, default case cannot salvage an element that has been marked in the syntax as inaccessible to case assignment. It is only confined to those elements that do not engage in the agreement and case system.

<sup>34</sup> In Chapter 4, I will argue that for some raising-to-object predicates (e.g., *believe*-type verbs) FP in (54) is actually a TP, or perhaps a reduced CP.

is no movement-from-a-Case-position problem, since the preverbal DP has never moved. There is no multiple-Case-assignment problem, since the preverbal DP gets only one case, that assigned by the relevant Case assigner if there is one, or by default if there is none.

On the other hand, since SV orders are base-generated as such, idiomatic readings are typically absent (or at best, unnatural). Even though the preverbal DP and the null subject *pro* form an A'-chain (say, via co-indexation), this is not enough to license idiomaticity at LF. Similarly, under a base-generation analysis, it is expected that the preverbal DP can be associated with a resumptive pronoun within a syntactic island. The typical case would be a coordinate structure island, since conjoined DPs can still function as subjects. As we have seen earlier (cf. the examples in (32)), this is indeed the case.

Finally, the assumption that full agreement is tied to the presence of a null subject *pro* in the structure explains to us the previously mentioned fact of multiple agreement in compound tense constructions (cf. the data in (15-16)). If such constructions contain two TPs, as argued in Section 2.1.2, then they also contain two subjects. If both subjects are *pro*, then the observed pattern of multiple agreement is predicted under the current analysis, since each *pro* needs to be identified by association with a complete  $\phi$ -complex, as required by the condition in (41).

## **2.6 On the position of dislocated DPs: A “zone” at the periphery**

So far, I have assumed that the preverbal DP in SV orders occupies SpecTP. But this is a simplification that was appropriate for the range of data we have looked at so far. Once we look at further data, it becomes clear that dislocated DPs have to occupy



more varied positions than just SpecTP. Rather than specifying a particular position for LD-ed DPs, I will assume, following Uriagereka (2006) that the clause periphery is a “zone,” where certain semantic effects arise. Alternatively, one can assume a finer-grained fully articulated CP, along the lines suggested by Rizzi (1997). While this latter approach can still account for the facts, I believe it posits more structure than required by the empirical facts. I will assume, therefore, that LD-ed DPs are typically Merged in the Spec of any functional head under C. Let us see how this helps us account for the semantic effects in SV orders.

Remember that SV structures have been traditionally treated as topic-comment structures, or LD in our terms. The question now is if we can derive this from the syntactic machinery assumed here. If P-features on functional heads can be associated with interface effects at the semantic level, then we can attribute these semantic effects to the licensing of a P-feature. A peripheral feature P on T or some higher head F would allow Merging of a DP in its Spec that is co-indexed with a resumptive pronoun in the thematic domain. We can identify the P-feature as “Topic” or “Given Information” or anything along these lines, if we want to. For the discussion here, I will assume that any functional head can have a P-feature, hence allowing a DP to be Merged in its Spec, with consequences at the level of interpretation.

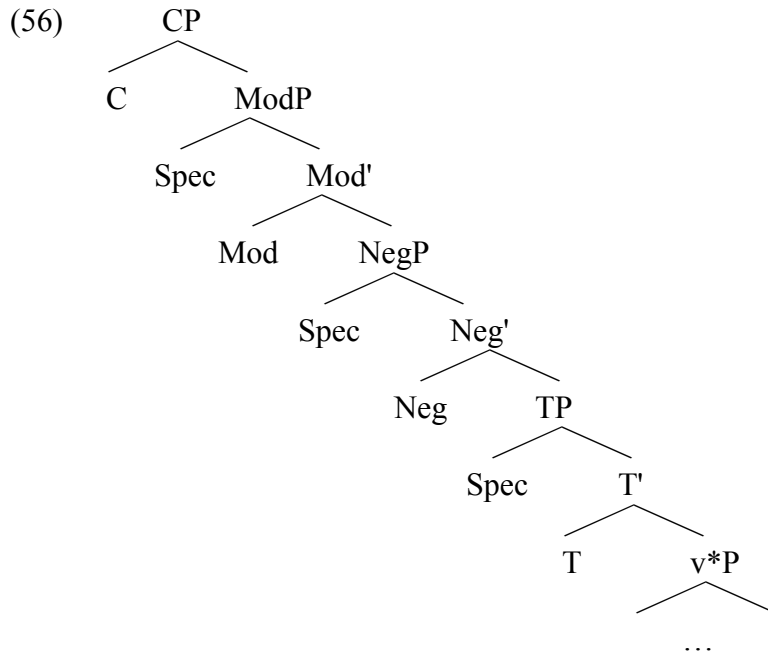
For SV orders in SA, I will assume that T can have such a P-feature. But other heads higher than T can have a P-feature as well. Since LD-ed DPs typically follow C in the surface order, I will assume that LD-ed DPs are Merged in the Spec of any functional head below C. In all the examples we discussed so far, I assumed that T is

where LD-ed DPs Merge. But that is mainly because such structures do not contain any other projections between T and C. In negative sentences such as (55a), for example, the peripheral position has to be SpecNegP, not SpecTP. The same holds if there is a modality phrase (ModP) in the structure, as in (55b), in which case the preverbal DP will occupy the Spec of the modality head.

- (55) a. [CP [NegP  $\text{ʔal-ʔwlaad-u}$  lam [TP yalaʔab-uu kurat-a  $\text{ʔal-qadam-i}$ ]]  
           the-boys-NOM           Neg play-3plmas   ball-ACC the-foot-DAT  
           “The boys did not play soccer.”
- b. [CP [ModP  $\text{ʔal-ʔwlaad-u}$  qad [TP yalaʔab-uuna kurat-a  $\text{ʔal-qadam-i}$ ]]  
           the-boys-NOM           may play-3plmas   ball-ACC the-foot-DAT  
           “The boys may play soccer.”

If this means anything, it is that the clause periphery is a “zone,” not a position, in syntactic structure, along the lines suggested in Uriagereka (2002b, 2006). If semantic effects are a reflex of licensing P-features on functional heads, as assumed here, then any head, in principle, is capable of licensing/hosting dislocated DPs.

For concreteness, let us consider the tree below:<sup>35</sup>



Given the structure in (56), LD-ed DPs may be Merged in SpecModP, SpecNegP, or SpecTP, all of which are part of the periphery zone.

Notice also that in cases of multiple LD, the periphery will consist of multiple Specs of the relevant functional head. An example of multiple LD is when both the subject and the object DP are dislocated, as in (57):

- (57)      ?al-kitaab-u      ?al-?wlaad-u      qara?-uu-hu  
                  the-book-NOM    the-boys-NOM    read-3plmas-it  
                  “The book, the boys, they read it.”

The linear order is not fixed; (58) is also possible:

- (58)      ?al-?wlaad-u      ?al-kitaab-u      qara?-uu-hu  
                  the-boys-NOM    the-book-NOM    read-3plmas-it  
                  “The boys, the book, they read it.”

Under the assumptions made above, both LD-ed DPs are in multiple Specs of T:

<sup>35</sup> Benmamoun (2000) assumes that NegP is actually lower than TP in SA. In Chapter 5, I will present empirical evidence for the placement of NegP above TP in SA.

(59) [<sub>CP</sub> [<sub>TP</sub> ?al-kitaab-u ?al-?wlaad-u T [<sub>v\*P</sub> *pro* [<sub>VP</sub> V Obj]]]]

(60) [<sub>CP</sub> [<sub>TP</sub> ?al-?wlaad-u ?al-kitaab-u T [<sub>v\*P</sub> *pro* [<sub>VP</sub> V Obj]]]]

If both LD-ed DPs enter the derivation at the same time,<sup>36</sup> then we have an explanation for the free ordering, and also for the fact that neither one intervenes with the other in the licensing of the P-feature on T.

To sum up, the analysis of the SVAA in terms of positing two different syntactic representations not only derives the word order facts and the agreement pattern associated with each, but also accounts for the set of syntactic and semantic distinctions between the two orders. The syntactic properties follow from the base-generation of the preverbal DP in an A'-position, while the semantic effects are the result of Merging LD-ed DPs at the periphery of the clause to license P-features on functional heads.

As it turns out, the current analysis can also account for the rarely discussed fact concerning uniform default agreement in certain grammatical contexts, which will be discussed in Chapter 2. In the next section, however, I revisit the phenomenon of first conjunct agreement in SA, and show how the analysis presented here can be extended to account for this agreement phenomenon.

## **2.7 One further agreement asymmetry: The case of first conjunct agreement in Standard Arabic revisited**

In this section, I revisit the phenomenon of first conjunct agreement (FCA, henceforward) with data from Standard Arabic, proposing that FCA can be accounted

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<sup>36</sup> I'm assuming here that multiple instances of the same operation might be the result of simultaneous probing (see Chomsky 2001a, b). Under this assumption, if two Goals are probed simultaneously by the same head, they should not intervene with one another, and their ordering is expected to be free. They will also end up in multiple Specs of that head.

for in terms of the interaction between the operation Agree and postcyclic merge of conjunction phrases.

### 2.7.1 First Conjunct Agreement in Standard Arabic

In SA, FCA is obligatory in VS orders where the subject is a conjoined DP, as shown by the contrast between (61a) and (61b) in the gender inflection on the verb, overtly manifest in the case of feminine gender.

- (61) a.     $\text{ʒaʔa}$                        $\text{Zayd-un}$                        $\text{wa}$      $\text{Hind-u}$   
                  came-3sgmas     $\text{Zayd-nom}$                       and     $\text{Hind-nom}$   
                  “Zayd and Hind came.”
- b.     $\text{ʒaʔa-t}$                        $\text{Hind-u}$                        $\text{wa}$      $\text{Zayd-un}$   
                  came-3sgfem     $\text{Hind-nom}$                       and     $\text{Zayd-nom}$   
                  “Hind and Zayd came.”

Full agreement with the whole conjoined DP is not possible in this context, as the ungrammaticality of the dual morpheme in (62) illustrates:

- (62)     $*\text{ʒaʔ-aa}$                        $\text{Zayd-un}$                        $\text{wa}$      $\text{Hind-u}$   
                  came-3dumas     $\text{Zayd-nom}$                       and     $\text{Hind-nom}$

As we should expect, when the conjoined DP precedes the verb, full agreement, not FCA, is the only possibility, as shown by the grammaticality contrast between (63a) and (63b) below:

- (63) a.     $\text{Zayd-un}$                        $\text{wa}$      $\text{Hind-u}$                        $\text{ʒaʔaa}$   
                   $\text{Zayd-nom}$                       and     $\text{Hind-nom}$                       came-3dumas  
                  “Zayd and Hind came.”
- b.     $*\text{Zayd-un}$                        $\text{wa}$      $\text{Hind-u}$                        $\text{ʒaʔa/ʒaʔa-t}$   
                   $\text{Zayd-nom}$                       and     $\text{Hind-nom}$                       came-3sgmas/came-3sgfem

As we have already seen, this full-versus-partial agreement pattern associated with word order alternation is not confined to cases where the subject is a conjoined DP. Rather, the SVAA applies to all lexical DPs. Recall also that if the first conjunct is a pronominal, then FCA in all  $\phi$ -features is obligatory with that pronominal:

- (64) a.  $\text{ʒiʔ-tu}$        $\text{ʔanaa}$      $\text{wa}$      $\text{Hind-u}$   
           came-1sg    I            and    Hind-NOM  
           “Hind and I came.”
- b.  $\text{ʒiʔ-nna}$              $\text{hunna}$        $\text{wa}$      $\text{ʔabaaʔ-u-hunna}$   
           came-3plfem    they<sub>FEM</sub>    and    fathers-NOM-their<sub>FEM</sub>  
           “They and their fathers came.”

As noted earlier in this chapter, FCA has always posed a challenge to a theory of agreement in terms of the Spec-head configuration, for the simple fact that, even under a derivation in which the conjoined subject is in SpecTP, it is not clear how agreement between T and the first conjunct can be enforced. A Spec-head analysis of FCA has still been proposed by Aoun *et al* (1994). According to them, FCA is only a “superficial” phenomenon, not a genuine one: cases of FCA, they argue, are actually derived through applying *coordination reduction* (CR) to an underlying clausal coordination structure, such that the Moroccan Arabic sentence in (65) is derived as in (66):

- (65)  $\text{nʕas}$              $\text{Kariim}$        $\text{w}$        $\text{Marwan}$      $\text{fə-l-biit}$   
           slept.3sg    Kareem      and    Marwan    in-the-room

(66) Derivation: Across-the-board verb raising + Right Node Raising

$[\text{nʕas}_j \text{ } [_{\text{IP}} \text{Kariim} \dots \text{t}_i \dots]] \text{ w } [_{\text{e}}_j \text{ } [_{\text{IP}} \text{Marwan} \dots \text{t}_i \dots]] [\text{fə-l-biit}]_i$

If conjunction is in fact clausal in FCA contexts, then we should expect the *[DP and DP]* string to fail semantic plurality tests, which, Aoun *et al* argue, is true in both Lebanese Arabic (LA) and Moroccan Arabic (MA). I illustrate here by citing their LA examples:

- (67) a. Kariim w Marwan raaho sawa  
           Kareem and Marwan left.pl together
- b. \*raah Kariim w Marwan sawa  
           left.3sg Kareem and Marwan together
- c. raaho Kariim w Marwan sawa  
           left.pl Kareem and Marwan together
- (68) a. Kariim w Marwan bihibbo haalun/baʕdun  
           Kareem and Marwan love.pl themselves/each other
- b. \*bihibb Kariim w Marwan haalun/baʕdun  
           love.sg Kareem and Marwan themselves/each other
- c. bihibbo Kariim w Marwan haalun/baʕdun  
           love.pl Kareem and Marwan themselves/each other
- (69) a. \*ltaʔa Kariim w Marwan  
           met.3sg Kareem and Marwan
- b. ltaʔo Kariim w Marwan  
           met.3pl Kareem and Marwan

As the data in (67-69) show, occurrence of FCA is incompatible with the presence of an element that inherently denotes semantic plurality: the adverbial *sawa* (=together) in (67), plural reflexives and reciprocals in (68), as well as functioning as subject of

intransitive “meet” (69). Under Aoun *et al*’s analysis, the explanation is simple: semantic plurality items cannot be licensed in FCA contexts for the simple reason that the surface string *[DP and DP]* is never a phrasal constituent at any point during the derivation; rather, it is the result of applying CR to a clausal coordination structure.<sup>37</sup>

Assuming that Aoun *et al*’s tests of semantic plurality are reliable diagnostics for the plurality of a *[DP and DP]* string (but see fn. 37), their analysis still cannot be maintained for FCA in other languages where conjoined subjects in VS structures pass all these tests of semantic plurality. One such language is the closely related language of SA, where the adverbial *maʕan* (=together), the reciprocal *baʕD-a-hum* *ʔal-baʕD* (=each other), as well as the occurrence as subject of intransitive *ʔiltaqa* (=meet), are all possible in FCA contexts (cf. Harbert and Bahloul 2002):

- (70) a. 3aʔa-t                      Hind-u              wa              Zayd-un              maʕan  
           came-3sgfem              Hind-nom              and              Zayd-nom              together  
           “Hind and Zayd came.”
- b. tuhibbu              Hind-u              wa              ʔaxaw-aa-haa              baʕD-a-hum              ʔal-baʕD  
           love.sgfem              Hind-nom              and              brothers-nom-her              some-acc-them              the-some  
           “Hind and her brothers love each other.”
- c. ʔiltaqa-t              Hind-u              wa              ʔaxaw-aa-haa              fii ʔal-ħafl-i  
           met.3sgfem              Hind-nom              and              brothers-nom-her              at the-party-gen  
           “Hind and her brothers met at the party.”

Harbert and Bahloul (2002:60) point out that the same is also true of Welsh, where occurrence of reciprocals (71a), functioning as subject of intransitive “meet”

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<sup>37</sup> Munn (1999) raises some doubts on the adequacy of the tests that Aoun *et al* use in support of their analysis, to which Aoun, Benmamoun, and Sportiche (1999) reply. I refer the reader to these sources for extensive discussion



(71b), as well as the use of the inherently dual preposition “between” (72a,b), are all compatible with FCA:

(71) a. Es i a'm brawd gyda ein gilydd  
 went.1sg I and-my-brother with each other

b. Cwrddais i a'm brawd ym Mharis  
 met.1sg I and-my-brother in Paris

(72) a. cynnen rhyngof fi a thi  
 strife between.1sg me and you

b. cwlwm o gariad sydd rhyngoch chwi a hi  
 bond of love which-is between.2pl you and her

Similarly, Johannessen (1996) provides examples from Czech where FCA does occur in the presence of semantic plurality items such as the so-called “strong *and*” *i* (=both), and distributive “each”, as illustrated by (73a) and (73b), respectively:

(73) a. Půjdu tam já i ty  
 will-go.1sg there I.nom and you.nom.2SG  
 “Both of you and I will go there.”

b. Po jednom jablku snědl Jan a Petr  
 at-the-rate-of one.loc apple-loc ate.3sg John and Peter  
 “John and Peter ate an apple each.”

To conclude, even if a CR analysis of FCA constructions in MA and LA is feasible, there is evidence that FCA constructions in SA, Welsh, and Czech, cannot be derived from an underlying clausal conjunction structure, therefore casting doubts

on the adequacy of the Spec-head approach to FCA, hence the need for an alternative analysis. This is the topic of the next section.<sup>38</sup>

### **2.7.2 Deriving FCA: Agree and Postcyclic Merge**

While FCA in SA and similar languages poses a problem for Spec-head approaches to agreement, it also seems to pose a problem for an Agree-based approach. After all, it is not clear why agreement should be with the first conjunct rather than with the whole conjoined postverbal subject. Agreement with the whole conjoined DP is attested, as we have already seen with regard to the data in MA and LA. Still, it is not clear how the Agree-based approach can force T to agree with the first conjunct, rather than with the whole conjoined DP.

One possible analysis is to assume that T can actually Agree with either the root DP node of the conjoined subject or the first DP conjunct, under assumptions of equidistance. Von Koppen (2005) makes a proposal along these lines for complementizer agreement in Dutch dialects, leaving it to morphology to decide which agreement relation holds at the interface, the choice being made on the basis of which agreement relation has a “more specific” morphology. It is not clear, however, if such an analysis can be extended to SA FCA facts. After all, full agreement morphology is more specific than partial agreement, and should be predicted to occur, contrary to fact.

Another approach is to assume that FCA is a linear-order-driven type of agreement, assigned under adjacency in the morphology. Under this approach, Agree may take place with the whole conjoined DP, but these agreement features give way

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<sup>38</sup> Later in the chapter, I will get back to suggest an explanation for why MA and LA are different from SA with regard to FCA.

to the agreement features of the first conjunct by a language-particular rule. The main problem with this linear approach is that FCA can still exist in absence of adjacency between the verb and the first conjunct, as shown in (74) below, where a shifted object intervenes between the verb and the first conjunct, yet FCA is still obligatory:

- (74)    qaraʔ-tu    ʔal-kitaab-a    ʔana    wa-zumalaaʔ-i  
           went-1sg   the-book-ACC   I        and-friends-my  
           “My friends and I went yesterday to the cinema.”

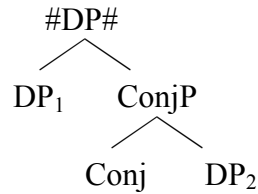
So, whatever morphological rule is involved, it has to be sensitive not just to the linear order, but also to structural information, but this is exactly what we expect a syntactic approach to agreement to do.

I would like to argue here that a structural explanation for FCA is still possible, without having to invoke linear order, and that FCA can be accounted for in terms of the derivational properties of conjoined DPs, interacting with Agree, as the mechanism for inducing agreement in natural language grammar. In particular, if conjoined DPs can be assembled in two ways during the derivation, we should predict two patterns of agreement. If conjunction is the result of adjunction, and if adjunction may apply early or late, then we predict that at the relevant point in the derivation where T probes, it could either agree with the whole conjoined subject (if adjunction has taken place) or with the first conjunct DP (if adjunction has not applied yet). The challenge is to make sure that such a ‘loose’ operation does not overgenerate. I will return to this issue later, but let us first see how this proposal accounts for FCA facts.

To provide an account of FCA, I will adopt the following assumptions with regard to the structural and morphological properties of conjoined DPs (notated as #DP#, henceforward). First, conjoined phrases are hierarchically organized (Munn

1992, Kayne 1994), though I choose here to follow Munn (1993, 1999) in assuming that the hierarchical organization within a conjoined phrase is actually the result of adjunction. More precisely, the conjunction head plus its DP<sub>2</sub> complement form an adjunct of DP<sub>1</sub>, as shown in (75) below:

(75)



Second, I will also assume here that the  $\phi$ -features of the root node #DP# are determined via the application of the so-called *feature resolution rules* (FRRs), e.g., first person+second person=first person; singular+dual=plural; masculine+feminine=masculine; etc., (cf. Corbett 1983, 2000 for an extensive discussion).

Finally, I will also assume that adjuncts can be introduced into the derivation “noncyclically”, via an operation of late-Merge, an idea first suggested in Lebeaux (1988), and implemented in different ways in Chomsky (1993), Fox and Nissenbaum (1999), and Uriagereka (2002c). Postcyclic Merge has typically been proposed to account for certain LF effects (e.g., binding) that cannot be accounted for under a strictly cyclic derivation. In this section, I would like to argue that postcyclic merge may also have PF effects, and that FCA is one such effect.<sup>39</sup>

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<sup>39</sup> As an example of how postcyclic merge can help us explain certain binding effects, consider the sentences below, for instance:

- (i) Which picture [<sub>COMPLEMENT</sub> of Bill<sub>i</sub>] [<sub>ADJUNCT</sub> that John<sub>j</sub> liked] did he<sub>\*i/j</sub> buy?
- (ii) a. Which claim [<sub>COMPLEMENT</sub> that John<sub>i</sub> was asleep] was he<sub>\*i</sub> willing to discuss?
- b. Which claim [<sub>ADJUNCT</sub> that John<sub>i</sub> made] was he<sub>i</sub> willing to discuss?

In (i), while coreference between *Bill* and *he* is disallowed, co-reference between *John* and *he* is possible, even though, after reconstruction, both DPs are c-commanded by the pronominal, in violation of Binding Condition C. A postcyclic approach to adjuncts is able to solve that problem, however, if at the point where binding conditions are evaluated the adjunct relative clause has not been Merged yet.

For simplicity of presentation, suppose that our target SV structure in SA is “[*DP and DP*] *V*” with full agreement surfacing on *V*. Given the base-generation analysis proposed earlier in this chapter for SV word orders, the structure of this sentence is as in (76) below, where #DP# is the preverbal conjoined phrase:

$$(76) \quad [_{CP} C [_{TP} \#DP\# T_{\phi/CLASS/EPP} [_{v^*P} pro \ v^* [_{VP} \dots]]]]$$

└─ AGREE ─┘ ↑

Agree between *T* and the null subject takes place in the regular fashion, while #DP# appears in LD-ed position, as has been argued for all preverbal DPs in the language. At the interface, since *pro* is identified by the agreement features on *T*, the derivation converges. The impossibility of partial/default agreement is ruled out by the interface condition on *pro* identification as argued earlier, whereas the impossibility of FCA follows simply from the fact that the first conjunct (or the whole conjoined phrase for that matter), being base-generated in SpecTP, is never in the search domain of *T*.

Consider now FCA in the VS order. Here our target structure is “*V* [*DP and DP*]” with the verb showing gender agreement with the first conjunct. If we followed the same assumptions as in the derivation of structures with preverbal conjoined subjects in the previous section, we should predict agreement to obtain between *T* and the whole postverbal #DP# subject, rather than between *T* and the first conjunct DP, as shown in (77) below:

$$(77) \quad [_{TP} T_{DEFAULT/CLASS} [_{v^*P} [\#DP\# DP_1 [_{ConjP} Conj DP_2]] \ v^* [_{VP} V \dots]]]$$

└─ Agree ─┘ ↑  
└─ Agree ─┘ X

---

The same proposal can also account for the asymmetry in binding possibilities between (iia) and (iib): co-reference between *he* and *John* in (iia) violates Condition C; co-reference between *he* and *John* in (iib) is possible since the binder DP is contained within an adjunct clause that can be inserted postcyclically, thereby allowing the apparent violation of Condition C.

While the Agree relation with #DP# in (77) is needed, given that occurrence of postverbal agreement with the whole conjoined postverbal subject is attested in natural languages, as Aoun *et al* argue is the case in Lebanese and Moroccan Arabic, still a problem arises with regard to languages such as SA, where FCA is the only option in such contexts. Perhaps a notion of equidistance can allow Agree to take place with DP<sub>1</sub> in (77), as von Koppen (2005) suggests. Still, this predicts that both types of agreement should occur in the language, contrary to fact. What we need is a mechanism to force agreement with the first conjunct in languages like SA.

I would like to argue here that it is in languages like SA that the option of postcyclic Merge of adjuncts is available for adjunct ConjPs. Specifically, FCA may be understood as the result of allowing Agree to take place with the  $v^*$ P-internal subject prior to the late adjunction of ConjP to that subject. More concretely, in the derivation of the structure “ $V [DP_1 \text{ and } DP_2]$ ,” there is a point at which we construct the following  $v^*$ P:

$$(78) \quad [_{v^*P} DP_1 v^* [_{VP} V \dots]]$$

Suppose, we then Merge T, thereby inducing a subsequent Agree relationship between T and DP<sub>1</sub> in the  $v^*$ P-internal subject position:

$$(79) \quad [_{TP} T [_{v^*P} DP_1 v^* [_{VP} V \dots]]]$$

$\downarrow$  AGREE  $\uparrow$

Postcyclically, we can then late-Merge the adjunct ConjP “*and DP<sub>1</sub>*” to the DP<sub>1</sub> in (79), at which point FRRs apply to compute the  $\phi$  and CLASS features of the conjoined DP, thereby licensing elements denoting semantic plurality (e.g., plural reflexives, reciprocals, “both,” “each,” etc.):

(80) [TP T [<sub>v</sub>\*P [#DP# DP<sub>1</sub> [ConjP and DP<sub>2</sub>]] v\* [<sub>v</sub>P V ...]]]

FCA is thus the result of agreement taking place prior to the introduction of the adjunct ConjP by late-Merge.<sup>40</sup>

While the above analysis can account for FCA in SA and similar languages, questions arise as to how to make sure that using the option of postcyclic Merge will not lead to overgeneration of ungrammatical structures in natural languages. In this respect, I discuss three cases of potential overgeneration below, arguing that they are either ruled out by independently needed principles of the grammar, or do actually give rise to structures attested in natural languages, hence providing support to the analysis.

First, consider the case where we Merge the first conjunct in Spec<sub>v</sub>\*P, allow T to Agree with it, then late-Merge ConjP, and then move the whole conjoined subject #DP# to SpecTP to license EPP on T, thereby deriving the bad sentence in (81) (81), where FCA obtains in an SV structure, claimed to be unattested in human languages (Corbett 2000):

(81) \*John and I loves each other.

Notice, however, that this derivation is ruled out by a basic assumption of Agree-based syntax: “Move is dependent on Agree” (Chomsky 2001a, 2001b). Since T never Agrees with #DP#, movement of that #DP# is not permitted.

A second case of potential overgeneration may occur if we Merge the first conjunct in Spec<sub>v</sub>\*P, allow T to Agree with it, then late-Merge ConjP, and then move

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<sup>40</sup> There is an implicit (and perhaps crucial) assumption here that postcyclic Merge of ConjP has to take place within the same cycle, which would be the CP phase in this instance.

the Agreed-with first conjunct to SpecTP to license EPP, thereby deriving the ill-formed structure in (82) below in a language like English:

(82) \*John has [*t* and I] met each other.

But this derivation is obviously ruled out by the *coordinate structure constraint* (CSC). Notice, however, that the analysis presented here makes an interesting prediction in cases such as (82): Suppose that the EPP feature on T in this case can be satisfied in some other way than moving the Agreed-with DP, say by an expletive in existential constructions, then we should predict that FCA becomes possible, since no potential violation of the CSC arises in this case, a prediction that is borne out by the grammaticality of FCA structures such as (83) below from English:

(83) There is a man and two women in the room.

Finally, notice that if late-Merge of adjuncts is an option, we should be able to “early-Merge” ConjP as well, thereby predicting full agreement rather than FCA to obtain in some languages. As noted earlier, this is true in some of today’s dialects of Arabic, as reported by Aoun *et al* (1994) for LA and MA, data repeated here for convenience:

- (84) a. raħo    Kariim    w    Marwan    sawa  
           left.pl   Kareem    and   Marwan    together  
           “Kariim and Marwan left together.”
- b. biħibbo    Kariim    w    Marwan    ħaalun/baʕdun  
           love.pl    Kareem    and   Marwan    themselves/each other  
           “Kariim and Marwan love themselves/each other.”



Complementizer agreement in Dutch and German also shows a similar range of possibilities: FCA only in Tegelen Dutch (85); full agreement only in Lapscheure Dutch (86); both options in Bavarian German (87) (data from von Koppen 2005):

(85) de-s doow en ich ôs treff-e  
 that-2sg you and I each other meet pl  
 “... that you and I could meet.”

(86) Kpeinzen da-n [Valère en Pol] morgen goa-n  
 I.think that-3pl Valère and Pol tomorrow go-pl  
 “I think that Valère and Pol will go tomorrow.”

(87) a. daß-sd du und d’Maria an Hauptpreis gwinna hab-ds  
 that-2sg you<sub>sg</sub> and the-Maria the first-prize won have-2pl  
 b. daß-ds du und d’Maria an Hauptpreis gwinna hab-ds  
 that-2pl you<sub>sg</sub> and the-Maria the first-prize won have-2pl  
 “... that Maria and you have won the first prize.”

One final point is in order. How do we explain that fact that both MA and LA do not allow items of semantic plurality in FCA contexts? In this respect, I suspect that Aoun *et al*’s (1994) analysis is basically correct. These two Arabic dialects do not have genuine cases of FCA. What looks like FCA structures are the result of applying coordination reduction on two clausal conjuncts. But why would MA and LA be different from SA, then? As Harbert and Bahloul (2002) point out, one reason for the difference may actually have to do with the fact that these dialects do not exhibit the SVAA. Faced with what looks like partial agreement with a plural subject in the primary linguistic data, children acquiring MA and LA may be simply forced to “reanalyze” the agreement pattern to be compatible with the absence of SVAA in

their languages. One such reanalysis is to assume that these FCA-like structures are the result of reduction of clausal coordination.

To summarize the analysis presented here, FCA arises from the interaction between two independently needed mechanisms of the grammar: Agree and late-Merge of adjuncts. Since Agree, by definition, is a “downward” operation, it follows that FCA can only obtain with arguments in postverbal position, a robust fact across human languages (cf. Corbet 2000). A Spec-head approach to agreement, however, cannot provide an analysis for these “downward” or “postverbal” properties of FCA.

## 2.8 Summary

The goal of this chapter has been to revisit the classical subject-verb agreement asymmetry from a minimalist perspective. It has been shown that the asymmetry is only apparent: surface full agreement is actually agreement with a v\*P-internal *pro* subject, whereas partial agreement is due to a default agreement option in the language for  $\phi$ -features valuation, though not for CLASS features. There is strong empirical evidence from the semantics of each word order, interaction with wh-movement, Case properties of pre- and postverbal DPs, idiom chunks, occurrence of overt resumptive pronouns, as well as islands, clearly indicating that the preverbal DP in SV structures is actually base-generated in its surface position rather than arriving there via movement. We can also extend the analysis to account for cases of FCA, when supplemented by the extra assumption that adjunct ConjPs may be introduced postcyclically in the thematic domain, thereby giving rise to Agree with only the first conjunct.

If correct, the analysis proposed here provides further evidence for a theory of grammar in which agreement is induced between syntactic elements, not as a reflex of a phrase-structure-theoretic relation, but in terms of a primitive built-in mechanism, Agree, specifically designed to do so. In the next two chapters, I provide further evidence that agreement and Case-assignment are not tied to DPs' occurrence in particular positions, nor to the presence of A-movement in syntactic structures.

## Chapter 3

### On Passives, (Non-)Raising, uniform default agreement, and Object Shift in Standard Arabic

In Chapter 2, I presented an analysis of word order alternation in SA in terms of base-generation of preverbal DPs in their surface position, while being linked with resumptive pronouns in the thematic domain, rather than in terms of subject raising from the thematic domain to the functional domain. I have also shown that this base-generation analysis derives the familiar subject-verb agreement asymmetry in terms of an interface condition on *pro* identification. We have also seen that the analysis unifies the treatment of preverbal DPs as belonging to the left periphery of the clause, which in this language, is every projection higher than  $v^*P$ . A question that arises, however, is why this should be so: Why would SA, and similar languages, resort to base-generation rather than the readily available operation Move. In this and the following chapter, I argue that the analysis given in Chapter 2 is actually consistent with the absence of A-movement operations in the language altogether, thereby suggesting a case of parameterization of A-movement (cf. Uriagereka 2006, and also the brief discussion of A-movement in Chapter 1 of this thesis). In particular, I show below that neither passive nor raising structures in SA involve any A-movement. I will also discuss object shift in the language, a phenomenon typically treated as an instance of A-movement in languages like Icelandic, and show that there is empirical evidence from intervention effects with A'-movement in double object constructions showing that object shift should be analyzed as A'-movement in SA. If correct, the analysis shows again that this is a language where agreement and Case assignment exist even in the absence of A-movement, in support of Agree-based syntax.

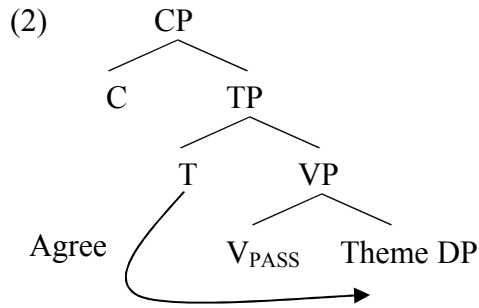
### 3.1 Passives

In SA, passive constructions are formed by having the verb appear in the passive morphological template. For example, in the perfective form of the verb, the tri-consonantal root will appear in the template  $C_1uC_2iC_3a$ , where C stands for “consonant radical,” and the subscripted number for the position of the consonant radical in the root. The infixed vowels provide the vocalic melody for the template. To illustrate, a verb like *kataba* becomes *kutiba*, when passivized. Compare the active and passive sentences below:

- (1) a.    *kataba*                    *Zayd-un*            *?al-risaalat-a*  
         wrote.3sgmas    Zayd-NOM    the-letter-ACC  
         “Zayd wrote the letter.”
- b.    *kutiba-t*                    *?al-risaalat-u*  
         wrote.PASS.sgfem    the-letter-NOM  
         “The letter was written.”

Crucial to the discussion here are two facts about the passive sentence in (1b):

(i) There is no required displacement of the internal argument in passive structures in SA; in fact, this is the unmarked order for passive structures, and (ii) this internal argument appears with nominative case and shows (gender) agreement with the verb, in the same way postverbal subjects do. Since there is no reason to believe that the internal argument of a passive verb has been displaced, we can conclude that that there is no A-movement in passive constructions in SA. A possible derivation of the passive sentence in (1b) would be along the following lines:



Under standard assumptions, the passive morpheme on V takes away the case-assigning ability of the verb, thereby making the Theme DP accessible for Agree with T, hence, its surfacing with nominative case.<sup>1</sup> Since there is no evidence that any displacement has taken place in (2), the occurrence of postverbal nominative Themes in passive structures in SA lends further support to a theory of agreement/case-assignment in terms of an operation of Agree that applies between elements at a distance, rather than in a Spec-head configuration. Equally important, formal feature checking does not have to coincide with A-movement.

That said, the passive construction in (1b) may also appear in the SV word order, as in (3) below:

- (3)      ?al-risaalat-u      kutiba-t  
          the-letter-NOM   wrote.PASS.sgmas  
          "The letter was written."

<sup>1</sup> Notice that absorbing the case-assignability of a passive verb is structurally reflected in the absence of *v\** in passive VPs. While this has been contested in the relevant literature (Legate 2003), this is not unreasonable for SA, since, unlike English and similar languages, SA does not allow the external argument to be lexicalized, even as an adjunct. The language does not allow a *by*-phrase in passive structures, for example:

- (i)    \*kutiba-t                      ?al-risaalat-u      bi-waasiTat-i      Zayd-in  
          wrote.PASS.sgmas   the-letter-NOM   by-mediation-DAT   Zayd-GEN

As we should expect, in this word order, full agreement is obligatory on the verb. This can be seen in the minimal pair in (4), where a plural DP occurs:

- (4) a.     Duriba                    ʔal-ʔawlaad-u  
                  hit.PASS.3sgmas   the-boys-NOM  
                  “The boys were hit.”
- b.     ʔal-ʔawlaad-u     Durib-uu  
                  the-boys-NOM   hit.PASS.3plmas  
                  “The boys were hit.”

Notice that the presence of VS passive structures such as (4a) show clearly that the Theme argument of a passive verb can be assigned Case in situ. If so, then a movement analysis of (4b) has to be driven by other features than  $\phi$ -features or Case, or the derivation would violate the *Case Freezing Condition* (CFC), as stated in (14) in Chapter 1.

As it turns out, however, SV passive structures exhibit the same semantic and syntactic properties noted in Chapter 2 with regard to SV word orders in general, thereby indicating that they should be treated in the same way, i.e., as cases of left dislocation (LD) that do not involve movement.

For one thing, indefinite non-specific NPs cannot occur in preverbal position in passive sentences, which is expected if this position is reserved for LD-ed elements:

- (5) a.     sa-yuʕTaa                    Taalib-un            ʒaʔizat-an  
                  FUT-give.PASS 3sgmas   student-NOM   prize-ACC  
                  “A student will be given a prize.”

- b. \*Taalib-un            sa-yuʃTaa                            ʒaʔizat-an  
          student-NOM    FUT-give.PASS 3sgmas       prize-ACC

Similarly, adjunct wh-phrases can only be fronted across postverbal subjects, but not across preverbal ones, as the grammaticality contrast in (6) below shows:<sup>2</sup>

- (6) a.    mataa        quSifa-t    ʔal-mudun-u        ʔal-ʕiraaqiyyat-u?  
          when        bombarded.PASS 3sgfem       the-cities-NOM    the-Iraqi-NOM  
                          “When were the Iraqi cities bombarded?”
- b.    \*mataa    ʔal-mudun-u        ʔal-ʕiraaqiyyat-u        quSifa-t?  
          when    the-cities-NOM       the-Iraqi-NOM        bombarded.PASS 3sgfem

If the preverbal DP of a passive verb is a DL-ed element in A'-position, then (6b) is ruled out as a minimality violation.

Postverbal DPs of a passive sentence are always nominative; preverbal DPs are only nominative by default. For example, in the presence of a preceding C of the case-assigning type like *ʔinna*, the preverbal DP will appear in the accusative case, as in (7) below:

- (7)    ʔinna    ʔal-mudun-a        ʔal-ʕiraaqiyyat-a    quSifa-t?  
          C        the-cities-ACC    the-Iraqi-ACC        bombarded.PASS 3sgfem  
                          “I affirm that the Iraqi cities were bombarded.”

Passive idioms are also typically VS in order; the SV variant sounds quite unnatural on the idiomatic reading:

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<sup>2</sup> Notice here that there is singular agreement on the verb in (6b), even though the preverbal DP is plural. This is an idiosyncratic property of plurals of [-human] nominals in Arabic. They all behave as singular feminine for the purposes of agreement (and adjectival concord for this matter). I do not discuss this property in this thesis, however.



- (8) a. ruʔiba                      S-Sadʕ-u              bayna-humaa  
mend.PASS 3sgmas    the-rift-NOM    between-them  
Literal: “The crack in the wall between them was fixed.”  
Idiomatic: “A reconciliation has been reached between them.”
- b. aS-Sadʕ-u      ruʔiba                      bayna-humaa  
the-rift-NOM    mend.PASS 3sgmas    between-them  
Literal reading is forced here.

In addition, if a verb is transitive by a preposition, passivization can still occur, though in this case the Theme DP will appear with dative, rather than with nominative, case, which is assigned by P within the PP internal argument,:

- (9) a. qabaDa-t                      al-šurTat-u              ʕalaa    ʔal-luSuuS-i  
arrested 3sgfem-Pass    the-police-NOM    on      the-thieves-DAT  
“The police arrested the thieves.”
- b. qubiDa                      ʕalaa    ʔal-luSuuS-i  
arrested.PASS.3sgmas    on      the-thieves-DAT  
“The thieves were arrested.”

Recall, however, from our discussion of verbs of deontic modality in Chapter 1 that there is an SV version of sentences like (9b) where the Theme DP appears preverbally, and an overt resumptive pronoun obligatorily appears within the dative PP, as we see in (10):<sup>3</sup>

- (10) ʔal-luSuuS-u      qubiDa                      ʕalay-**him**  
the-thieves-NOM    arrested 3sgmas-Pass    on-them  
“The thieves, they were arrested.”

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<sup>3</sup> Notice that the passivized verb in P-passives always appears in default agreement. Gender agreement in that case is not even possible. I will get back to discuss why this is so in the discussion of uniform default agreement.

If overt resumption is taken to signal lack of movement, as I have assumed here, then the passive sentence in (10) has to be treated as a LD structure, exactly along the lines we proposed for SV structures in SA in general. Notice that the preverbal DP can be associated with a resumptive pronoun inside an island. I illustrate here with the Complex NP island for a nonsubject DP and coordinate structure island for a subject DP:

- (11) a.   ʔal-luSuuS-u           qubiDa                           ʔalay   ʔar-raʒul-i  
           the-thieves-NOM   arrested 3sgmas-Pass   on       the-man-DAT  
           ʔallaðii               saaʔada-hum  
           who.mas               helped.3sgmas.them  
           “The thieves, the man who helped them was arrested.”
- b.   Zayd-un           qutila                           huwwa   wa-axuu-hu  
           Zayd-NOM   killed.PASS 3sgmas   he       and-brother-NOM-his  
           “Zayd, he and his brother were killed.”

Once again, resumption inside an island points to a base-generation analysis of sentences like those in b.

To sum up, there is good evidence in SA showing that the language does not make use of A-movement in the derivation of passive structures. Rather, the internal argument of a passivized verb can agree with the verb and get assigned nominative case in situ. SV passive structures, like SV word orders in general, exhibit the same syntactic and semantic properties of LD structures. If so, then we have another case where movement is not involved in licensing formal features, further evidence for an operation Agree.

### 3.2 (Non-)raising

Raising predicates in SA, unlike their counterparts in languages like English, select a finite tensed clause. Notice that SA does not have infinitivals. The closest clause type to infinitivals is subjunctives, which occur with control and some raising-to-object predicates (see Chapter 4 for a discussion). Raising predicates, however, do not select subjunctives. Rather, they select a finite/tensed CP. Given standard assumptions of minimalist syntax regarding the CFC on NPs/DPs, we should predict that SA will not have any raising constructions, which is true, in consistency with one of the main themes of this thesis: SA is a language that does not make use of A-movement operations. In this section I both illustrate raising constructions in SA, and argue that they do not involve A-movement.

A prototypical raising predicate is *yabduu* (= seem), as used in the following sentence:

- (12)    *yabduu*            *ʔanna*        *l-ʔawlaad-a*        *qad*    *ħaDar-uu*  
         seem.3sgmas    C            the-boys-ACC    PCL    came-3plmas  
         “It seems that the boys have come.”

The SA example in (12) corresponds to the given English translation. There is no parallel structure in the language that corresponds to “*John seems to have come*,” however. But in addition to (12), we also have (13):

- (13)    *ʔal-ʔawlaad-u*    *yabduu*            *ʔanna-ħum*    *qad*    *ħaDar-uu*  
         the-boys-NOM    seem.3sgmas    C-they            PCL    come/PERF-3plmas  
         “The boys, it seems that they have come.”

Notice here that the raising verb *yabduu* does not show full agreement in (13), which is unexpected in SV orders; rather, in both (12) and (13), the verb appears in the same third person singular masculine form. This is in itself an important question which I will return to in the next section. For now, notice that when the raising predicate *yabduu* is preceded by a DP, that DP has to be associated with a pronoun cliticized onto the C of the embedded clause. As with other alternations of this sort in the language, I would like to argue that (12) and (13) are not transformationally related, and that (13) is a base-generated LD structure.

First, the preverbal DP in a *yabduu*-construction cannot be indefinite, as expected if this is an LD construction:

- (14) a.    *yabduu*            ?anna    ?awlaad-an    saraq-uu        ?al-xubz-a  
              seem.3sgmas    C           boys-ACC       stole 3plmas    the-bread-ACC  
              “It seems that some boys stole the bread.”
- b.    \*?awlaad-un    *yabduu*            ?anna-hum    saraq-uu        ?al-xubz-a  
              boys-NOM       seem.3sgmas    C-they           stole 3plmas    the-bread-ACC  
              “Some boys, it seems that they stole the bread.”

The preverbal DP also blocks wh-extraction, as the ungrammaticality of (15b) below shows, thereby suggesting that it occupies an A'-position, hence intervening with wh-movement:

- (15) a.    ?? man    *yabduu*            ?anna    ?al-?awlaad-a    qaabal-uu?  
              who    seem.3sgmas    C           the-boys-ACC    met 3plmas  
              “Who does it seem that the boys met?”

- b.   ʔ\*man   ʔal-ʔawlaad-u   yabduu           ʔanna-hum   qaabal-uu?  
           who   the-boys-NOM   seem.3sgmas   C-they           met 3plmas

While (15a) is not totally perfect, it is because the gap-strategy is a more marked option in question formation out of embedded clauses than the resumptive-pronoun-strategy. (15b), however, sounds much worse.

Similarly, the DP in pre-*yabduu* position does not have to appear with nominative case. If the matrix C *ʔinna* is used, then (lexical) accusative case is assigned to that DP:

- (16)   ʔinna   ʔal-ʔawlaad-a   yabduu           ʔanna-hum   saraq-uu       ʔal-xubz-a  
           C       boys-ACC       seem.3sgmas   C-they       stole 3plmas   the-bread-ACC  
           “Some boys, it seems that they stole the bread.”

Idiomatic readings are typically not available if part of the idiom is in the pre-*yabduu* position, which would be unexplained if these constructions involve raising or copy raising:

- (17)   ʔal-kayl-u                               yabduu           ʔanna-hu   faaDa  
           the-holding-capacity-NOM   seem.3sgmas   C-it       overflowed 3sgmas  
           Literal meaning only: “The holding capacity seems to full.”

Notice further that the preverbal DP in *yabduu*-type constructions does not have to be associated with the subject of the embedded CP. It can be associated with the direct object, indirect object, or the genitive DP:

- (18) a.   haḏaa   al-kitaab-u       yabduu           ʔanna   Zayd-an       qaraʔa-**hu**  
           this   the-book-NOM   seem.3sgmas   C       Zayd-ACC   read 3sgmas-it  
           “‘This book, it seems that Zayd read it.”

- b. Zayd-un      yabduu      ?anna    ?aliyy-an    ?aʔTaa-**hu**  
 Zayd-NOM    seem.3sgmas    C      Ali-ACC    gave 3sgmas-him  
 maal-an  
 money-ACC

“Zayd, it seems that Ali gave him money.”

- c. Zayd-un      yabduu      ?anna    ?abaa-**hu**      haDara  
 Zayd-NOM    seem.3sgmas    C      father-ACC-his    came 3sgmas

“Zayd, it seems that his father came.”

Notice, finally, that the pre-*yabduu* DP can be associated with a resumptive pronoun within an island, hence signaling absence of movement. I illustrate this here by examples for the coordinate structure constraint, the adjunct island constraint, the Complex NP constraint:

- (19) Zayd-un      yabduu      ?anna-hu    wa-?abaa-**hu**  
 Zayd-NOM    seem.3sgmas    C-he      and-father-ACC-his  
 qad          haDaraa  
 PCL          came.3dumas

“Zayd, it seems that he and his father have come.”

- (20) Zayd-un      yabduu      ?anna      ?aliyy-an      ʔaDiba  
 Zayd-NOM    seem.3sgmas    C      Ali-ACC      got-angry.3sgmas  
 baʔda      ?an          qaabala-hu  
 after      C          met.3sgmas.him

“Zayd, it seems that Ali got angry after he met him.”

- (21) Zayd-un      yabduu      ?anna      ?aliyy-an      qaabala  
 Zayd-NOM      seem.3sgmas    C          Ali-ACC      met.3sgmas  
 ?al-marʔat-a    ?allati      tazawwaʒa-t-hu  
 the-woman-ACC    who          married.3sgfem.him

“Zayd, it seems that Ali met the woman who married him.”

Given the theoretical problems associated with a raising analysis of *yabduu*-type constructions in SA out of a finite CP, as well as the empirical evidence showing that the preverbal DP in the matrix clause of sentences like (13) is, in fact, a LD-ed element, I conclude that SA is a language does not resort to A-movement in raising constructions.

### 3.3 Uniform default agreement and absence of the agreement asymmetry

In the discussion of the two previous sections, I have pointed out to the fact that in certain constructions in SA, the matrix verb obligatorily shows default agreement, including in gender, irrespective of whether there is a preverbal DP or not. Two such cases are prepositional passives (P-passives, henceforward) and raising structures. In this section, I discuss why the agreement asymmetry characteristic of this language breaks down in these two constructions.

#### 3.3.1 P-passives

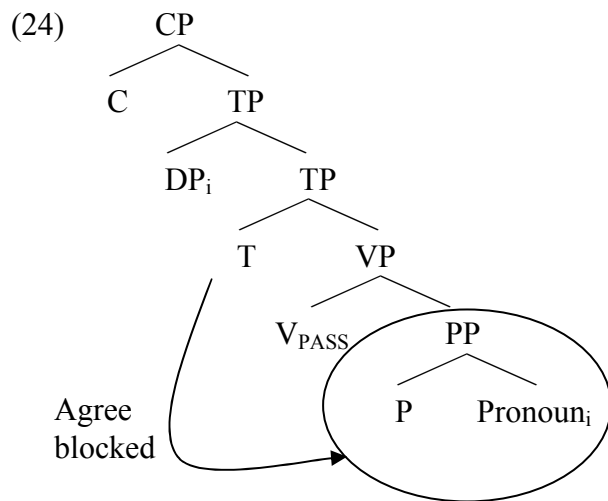
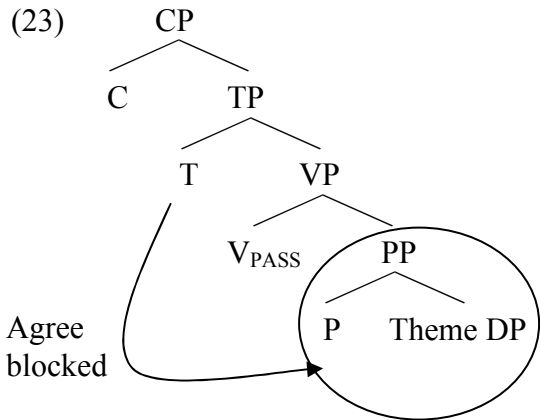
Recall that in P-passives, the Theme argument is actually a complement of a P, and that in such cases, the verb uniformly appears in default agreement, both in the VS (22a) and the SV order (22b):

- (22) a. qubiDa                                      ʔalaa    ʔal-luSuuS-i  
           arrested 3sgmas-Pass    on            the-thieves-DAT  
           “The thieves were arrested.”
- b. ʔal-luSuuS-u            qubiDa                                      ʔalay-him  
           the-thieves-NOM    arrested 3sgmas-Pass    on-them  
           “The thieves, they were arrested.”

What (22) shows us, then, is that the word order alternation does not coincide with an agreement asymmetry. Rather, the verb uniformly appears in the same default third person, singular, masculine agreement. If full agreement in SV orders were derived under a Spec-head configuration, absence of full agreement in (22b) would be a mystery. The only way to account for (22b) under the Spec-head analysis is to assume that the preverbal DP in such cases is not actually a subject, but a LD-ed phrase, and that the passive verb actually agrees with a null expletive. I already discussed the conceptual, technical, and empirical problems associated with null expletives in Chapter 2, and while an LD analysis of (22b) is indeed correct, under the Spec-head analysis it requires treating P-passives differently from other passive constructions, which is unwarranted. If, however, all SV orders are cases of LD in the language, as proposed in the current analysis, then the status of (22b) as an LD structure is not at all surprising. That said, we still need to explain why verbs in P-passives never show agreement.

Given the analysis presented here, this is indeed what we expect. If agreement is induced via Agree, then in the structures of both (22a) and (22b), the only target for agreement (whether it is a lexical DP (cf. (23)) or a pronoun (cf. (24)) is “buried” inside a lexically case-marked domain, i.e., the PP, inaccessible to Agree, by the CFC. Given that there is no other potential target in the structure, the only agreement that the verb can show in these cases has to be last-resort default agreement:





This analysis is supported by the fact that even gender agreement is not allowed to surface in such structures. Compare (25a), where the DP inside the dative PP is masculine, with (25b), where the DP inside the dative PP is feminine:

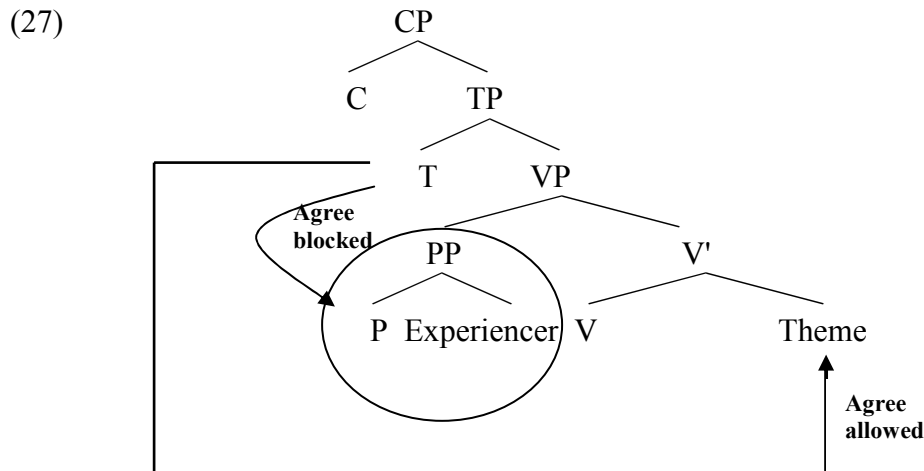
- (25) a.      qubiDa                      ʕalaa      ʔal-liSS-i  
                  arrested 3sgmas-Pass      on      the-thief-DAT  
                  “The male thief was arrested.”
- b.      qubiDa                      ʕalaa      ʔal-liSS-at-i  
                  arrested 3sgmas-Pass      on      the-thief-fem-DAT  
                  “The female thief was arrested.”

In both sentences in (25), the verb appears with (default) masculine agreement. This is predicted under the current analysis, since no probing of any kind is possible into a PP, an opaque domain for formal feature licensing, since the (lexical) Case assigned to the Theme DP renders it “inactive” for  $\phi$ -feature evaluation; as a result, even the CLASS feature on T cannot be valued via Agree and has to be assigned a default value, instead.

This analysis gains support from constructions headed by verbs of deontic modality, which select a PP as the Experiencer argument. Unlike P-passives, however, verbs of deontic modality also select a Theme argument. If the current Agree-based analysis is correct, we should predict that gender agreement and nominative case assignment become possible, which is indeed borne out:

- (26)    yajib-u/tajib-u                      ʔalaa   ʔal-muʔminiina   ʔal-Salaat-u  
           must-3sgmas/must-3sgfem on       the-believers<sub>DAT</sub> the-praying-NOM  
           “The believers have to pray.”

Despite the opacity of the Experiencer PP in sentences such as (26), the possibility of agreement and nominative case assignment follows from the presence of another Goal for Agree with T, that is, the Theme DP, as shown in the tree below:



Notice that the presence of the Experiencer argument does not give rise to a defective intervention effect as introduced in Chapter 1, since the Experiencer DP does not c-command the Theme argument. Only the PP does. Agree between T and Theme is therefore allowed, giving rise to gender agreement as well as nominative case assignment.

A question arises with regard to the optionality of gender agreement in (26). Notice, however, that is not confined to these particular constructions, but is true of all cases of gender agreement when the verb and the agreeing DP are not adjacent at surface structure. I suggested earlier that this can be accounted for in terms of a morphological rule that allows gender agreement to drop in non-adjacency contexts. Syntactically, though, agreement does take place, as evidenced by its actual appearance as well as the appearance of nominative case on the Theme argument.

A similar pattern arises in possessive and locative constructions, which are both expressed by PPs in SA. In such constructions, agreement and nominative case assignment can be established with the Theme argument, since the Possessor/Location argument is inside a PP, hence inaccessible for Agree. This is true whether the Possessor/Location argument remains inside the PP (28a, 29a), or is LD-ed to a peripheral position in the clause, while being resumed by a pronoun inside the PP (28b, 29b). Notice that in this latter case, the preverbal Possessor DP does not induce full agreement on the verb, as the ungrammaticality of (28c) shows:<sup>4</sup>

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<sup>4</sup> It is not possible to construct examples like (28c) for locative constructions, since location DPs are [-human], and plurals of [-human] DPs act uniformly as singular feminine for the purposes of agreement, as noted earlier in fn. 3, hence the absence of a (c) sentence in (29).

- (28) a. kaana/kaana-t            ʔinda ʔal-ʔawlaad-i    sayyarat-un  
           was 3sgmas/3sgfem    to        the-boys-DAT    car-NOM  
           “The boys had a car.”
- b. ʔal-ʔawlaad-u    kaana/kaana-t            ʔinda-hum    sayyarat-un  
           the-boys-NOM    was 3sgmas/3sgfem    to-them        car-NOM  
           “The boys, they had a car.”
- c. \*ʔal-ʔawlaad-u        kaan-uu            ʔinda-hum        sayyarat-un  
           the-boys-NOM        was 3plmas        to-them            car-NOM
- (29) a. kaana/kaana-t            fii ʔal-bayt-i            ʔimraʔat-un  
           was 3sgmas/3sgfem    in    the-house-DAT    woman-NOM  
           “There was a woman in the house.”
- b. ʔal-bayt-u            kaana/kaana-t            fii-hi    ʔimraʔat-un  
           the-house-NOM    was 3sgmas/3sgfem    in-it    woman-NOM  
           “There was a woman in the house.”

The agreement and case facts here parallel those in deontic modality constructions, since Agree, while blocked with the possessive/locative PP, is still possible with the Theme argument that is available for formal feature licensing.

In sum, uniform default agreement in P-passives is the result of the absence of an accessible Goal for Agree, the Theme DP being “buried” inside a PP, where it gets lexical case, hence is inactive for the formal features licensing system. Comparable constructions with PP arguments may still show verbal agreement and nominative case assignment, if a potential target for Agree exists in the structure, as in the case of constructions with deontic modality verbs, as well as possessive/locative structures.

### 3.3.2 Uniform default agreement with raising predicates

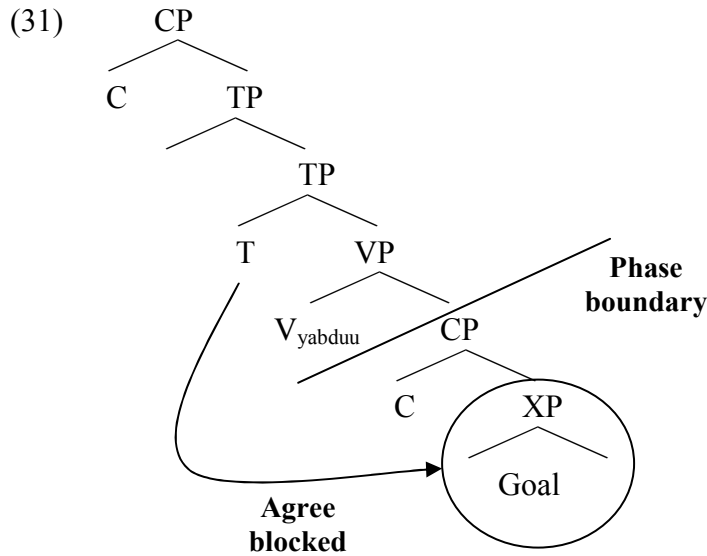
The second case of uniform default agreement that we have already seen arises with *yabduu*-type predicates. As we have seen, in such constructions the raising predicate appears with invariant default agreement, even in the presence of a preverbal DP. The examples are repeated here for convenience:

- (30) a. **yabduu**      ?anna l-?awlaad-a      qad      haDar-uu  
seem.3sgmas    C      the-boys-ACC    PCL    come/PERF-3plmas  
“It seems that the boys have come.”
- b.    ?al-?awlaad-u    **yabduu**      ?anna-hum    qad      haDar-uu  
the-boys-NOM    seem.3sgmas    C-they      PCL    come/PERF-3plmas  
“The boys, it seems that they have come.”

Under the analysis proposed here, this pattern of default agreement is, in fact, expected. In both sentences in (30), matrix T cannot Agree with any DPs within the embedded CP (whether that is a lexical DP or a pronoun), under locality conditions of cyclic syntax, as discussed in Chapter 1. In particular, Chomsky’s (2000) *Phase Impenetrability Condition*, prohibits syntactic operations from targeting any positions lower than the Spec (or, the *edge*) of the immediately preceding phase, where phases are assumed to be CPs and *v*\*Ps. Notice that there is not even partial agreement here. Default agreement extends to the CLASS feature on T as well, exactly as expected given CP-opacity for Agree:<sup>5</sup>

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<sup>5</sup> As pointed out in Chapter 2, C can have a range of complements, including TP, NegP, and ModP, hence the use of XP in the tree in (31).



Now, whether the Goal inside the embedded XP in (31) is a lexical DP (as in 30a) or a pronoun (as in 30b), no Agree relation can take place within that domain, since each is again “buried” inside the complement domain of the CP phase (XP in (31)) and not at the edge of that CP, hence inaccessible to grammatical operations.


A question arises, however, as to why *yabduu* and similar verbs cannot appear with full agreement, even in the presence of a preverbal DP. Under the analysis presented here, there is a straightforward answer for that: *yabduu* does not select an external argument, hence the possibility of Merging a *pro* in Specv\*P does not arise, and full agreement is in turn impossible to obtain. Crucially, though, this means that at no point during the derivation does *yabduu* engage in an agreement relation with the preverbal DP. If it did, then we have no explanation for the uniform default agreement it obligatorily shows in all contexts.

Notice, finally, that there is nothing lexically or morphologically idiosyncratic about *yabduu*-type predicates that prevent them from surfacing with full agreement features. If any of these verbs occurs in a configuration where T can Agree with an

accessible Goal, full agreement becomes possible in the SV order again. As it turns out, *yabduu* itself is one such verb when used as a linking predicate:

- (32)    *yabduu*            *l-ʔawlaad-u*        *mubtahiʒ-iin*  
           seem.3sgmas    the-boys-NOM    happy-pl.mas.ACC  
           “The boys look happy.”

There have been several proposals as to the right analysis of copular constructions. I will not dwell on this issue here (but see Benmamoun 2000 for an extensive discussion). Rather, I will assume that a copular/linking verb selects a small clause (SC) as its complement, such that the structure of the sentence in (32) is as in (33):

- (33)    [TP T [VP V<sub>LINK</sub> [SC SUBJ AP]]]
- 

Given the structure in (33), this is a configuration where Agree may take place between T and SUBJ within the SC complement of the linking verb V<sub>LINK</sub>, since SCs are not opaque domains for agreement and Case-assignment. This predicts that partial gender agreement should be obligatory in such cases, which is true: As (34a) shows, default gender morphology is ungrammatical with a feminine subject:

- (34) a.    \**yabduu*            *l-fatayaat-u*        *mubtahiʒ-aat-in*  
           seem.3sgmas    the-girls-NOM    happy-pl.fem-ACC
- b.    *tabduu*            *l-fatayaat-u*        *mubtahiʒ-aat-in*  
           seem.3sgfem    the-girls-NOM    happy-pl.fem-ACC  
           “The girls look happy.”

Similarly, given the analysis presented here, SUBJ within the SC in (33) may in principle be a *pro* associated with a DP at the periphery of the clause, in which case we should predict full agreement on *yabduu* as with other regular verbs, a prediction

that is again borne out by sentences like (35a). Notice that default agreement is totally out here, as the ungrammaticality of (35b) shows:

- (35) a.    ʔal-ʔawlaad-u   yabd-uuna    mubtahiʒ-iin  
           the-boys-NOM   seem.3plmas   happy-pl.mas.ACC  
           “The boys, they look happy.”
- b.    \*ʔal-ʔawlaad-u   yabd-uu       mubtahiʒ-iin  
           the-boys-NOM   seem.3sgmas   happy-pl.mas.ACC  
           “The boys, they look happy.”

### 3.3.3 Summary

To sum up the discussion of in this section, uniform default agreement with P-passives and *yabduu*-type predicates follows from the general assumptions of Agree-based syntax such as the activity condition on NPs/DPs and phase impenetrability. At the same time, the existence of constructions with nominative Themes, as with verbs of deontic modality and possessive/locative constructions, lends further support for a theory of agreement and case assignment in terms of a primitive operation Agree.

It is worth noting that such constructions are rarely discussed in the relevant literature. One thing is certain, though; with the exception of the null expletive analysis, none of the previous analyses of the SVAA can be extended to these constructions, and they have to be treated differently from SV structures in general, probably as cases of topicalization or left-dislocation. Under the present analysis, these constructions and the associated agreement patterns follow directly from the structure assigned to SV structures in general, as well as from independently motivated principles of Agree-based syntax such as the activity condition and phase impenetrability.



### 3.4 Object shift

Object shift (OS) is another displacement phenomenon that has been assumed by several researchers to be an instance of A-movement in natural language grammar (Holmberg 1986; Déprez 1989; and Vikner 1991; by contrast, Holmberg and Platzack 1995 provide evidence that OS has A'-properties). OS has been discussed in several languages, notably Icelandic and other Scandinavian languages. The phenomenon refers to the displacement of an object to the  $v^*P$  periphery, where it comes to precede materials that are typically assumed to be base-generated at the edge of  $v^*P$ , e.g., negation markers or adverbs. Consider the following Icelandic data from Thráinsson (2001), where  $t_i$  is the trace of the shifted object:

- (36) a.    Nemandinn    las    ekki    bókina  
         student-the    read    not    book-the  
         “The student didn’t read the book.”
- b.    Nemandinn    las    bókina<sub>i</sub>    ekki     $t_i$   
         student-the    read    book-the    not  
         “The student didn’t read the book.”

In (36a), the object *bókina* follows the negation marker *ekki*, hence presumably stays in situ within the VP, while in (36b), it appears to the left of the negation marker, hence suggesting that it has left the VP domain.

OS is typically associated with interpretive effects of definiteness and specificity. Indefinite NPs, therefore, cannot undergo OS, as the ungrammaticality of (37b) below shows:

- (37) a. Hún keypti ekki kaffi  
           she bought not coffee  
           ‘‘She didn’t buy coffee.’’
- b. \*Hún keypti kaffi<sub>i</sub> ekki t<sub>i</sub>  
           she bought coffee not  
           ‘‘She didn’t buy coffee.’’

There is an extensive literature on OS, and it is not my goal in this section to review that literature or contribute anything to the discussion of OS of the Icelandic-type. Rather, I would like to look at data of OS in SA, and raise the question of whether it is an instance of A- or A'-movement. As we should expect, this is a rather challenging task, given the lack of evidence for A-movement in the language, as has been argued in this chapter. In particular, in absence of standard A-movement constructions, like passive and raising, it will be hard to find conclusive evidence regarding the status of OS in SA. In the next two sections, I present data to illustrate OS in SA and its properties. We will see that it differs from Icelandic-type OS in a number of ways. I will then raise the question regarding the status of the movement involved, in light of the standard tests typically used to distinguish between A- and A'-movement, to see if they can tell us anything about the status of OS in SA.

### 3.4.1 Object shift in SA

Objects in SA can undergo OS, whereby they surface in a position between the sentence-initial verb and the postverbal subject, as in (38b):

- (38) a. qaraʔa           Zayd-un       ʔal-kitaab-a  
           read.3sgmas   Zayd-NOM   the-book-ACC  
           ‘‘Zayd read the book.’’

- b. qaraʔa            ʔal-kitaab-a      Zayd-un  
      read.3sgmas   the-book-ACC   Zayd-NOM  
      “Zayd read the book.”

Notice that this is unlike Icelandic-type OS, where the shifted object does not come to precede the subject, the difference being that Icelandic subjects have to raise out of the VP to SpecTP (or a similar projection).

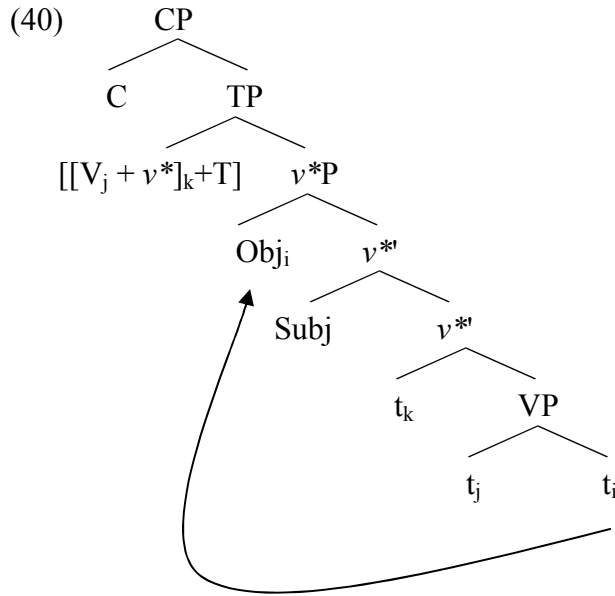
The interpretive effect of OS in SA is similar to the Icelandic-type, since it is typically definite or specific DPs that undergo OS. Notice also that, as in Icelandic and other Scandinavian languages, pronouns obligatorily undergo OS in SA:

- (39) a. qaraʔa-**hu**            Zayd-un  
      read.3sgmas-it   Zayd-NOM  
      “Zayd read it.”
- b. \*qaraʔa            Zayd-un      -hu/huwwa  
      read.3sgmas   Zayd-NOM   it  
      “Zayd read it.”

It is not clear here, though, that the displacement has any interpretive consequences, apart from the (inherent) definiteness of the pronoun. Rather, pronominal OS seems like a case of cliticization since object pronouns are enclitics that have to attach to a host. For this reason, I will ignore pronominal OS in the present discussion, focusing instead on OS of lexical DPs.

One first question to ask has to do with the position the shifted object occupies in surface structure. If objects start as complements to V, where does an object that undergoes OS appear in surface structure? Given the data in (38), it seems that a

reasonable hypothesis is that shifted objects are displaced to the  $v^*P$  edge. This is supported by the fact that they come to intervene between verbs (which are under T since this is a verb-raising language; see Fassi Fehri 1993; Ouhalla 1994; and Benmamoun 2000) and the subject, which is assumed to remain in situ in the language. If so, then a tree of an OS structure would look like the one in (40):



Now, if OS actually proceeds as in (40), can we determine if it is an instance of A- or A'-movement? I discuss this in the next section.

### 3.4.2 OS in SA: A- or A'-movement?

There seems to be suggestive evidence in favor of treating OS as an instance of A'-movement. First, the movement does have interpretive consequences, which is a typical characteristic of movement to A'-positions. Passive and raising, for example, do not typically generate semantic effects, while topicalization obviously does. Second, A-movement is typically associated with checking of formal features like Case and agreement, which is not quite obvious in the case of OS, since the non-OS

structure does show that these features can be checked without overt movement. Related to this is the assumption that A-movement is mainly restricted to NPs/DPs, since it is these categories that can engage in the Case/agreement checking system. OS in Icelandic, for example, does not apply to PPs:

- (41) a. Jón las ekki um bókina  
 John read not about book-the  
 “John didn’t read about the book.”
- b. \*Jón las um bókina ekki  
 John read about book-the not  
 “John didn’t read about the book.”

Unlike what we see in Icelandic, OS in SA does apply to PPs, as shown by the following example:

- (42) a. taħaddaθa Zayd-un maʕa ʕaliyy-in  
 spoke.3sgmas Zayd-NOM with Ali-DAT  
 “Zayd spoke with Ali.”
- b. taħaddaθa maʕa ʕaliyy-in Zayd-un  
 spoke.3sgmas with Ali-DAT Zayd-NOM  
 “Zayd spoke with Ali.”

In fact, OS can apply, to some degree, to CP complements of verbs as well. Consider the following example:

- (43) a. ʔablaʕa-ni Zayd-un ʔanna ʔal-maTaar-a muʕlaq-un  
 told.3sgmas-me Zayd-NOM that the-airport-ACC closed-NOM  
 “Zayd told me that the airport is closed.”

- b.   ʔablaʔa-ni           ʔanna   ʔal-maTaar-a       muʔlaq-un       Zayd-un  
       told.3sgmas-me   that     the-airport-ACC   closed-NOM   Zayd-NOM  
       “Zayd told me that the airport is closed.”

Notice that (42b) and (43b) are not cases of subject right dislocation (SRD), since agreement on the verb is partial. As Ouhalla (1994) points out, in SRD, agreement is always full, as shown by the following SRD sentences:

- (44) a.   taħaddaθ-uu   maʔa   ʔaliyy-in   ʔal-zumalaaʔa-u  
           spoke.3plmas   with   Ali-DAT   the-colleagues-NOM  
           “They spoke with Ali, the colleagues.”
- b.   ʔablaʔ-uu-ni       ʔanna   ʔal-maTaar-a       muʔlaq-un       ʔal-zumalaaʔa-u  
       told.3plmas-me   that     the-airport-ACC   closed-NOM   the-colleagues-NOM  
       “They told me that the airport is closed, the colleagues.”

In (44), there is also a phonological break just before the right dislocated DP. Such pause is absent in the non-SRD structures in (42b, 43b).

If A-movement is indeed confined to nominal categories, then the fact that both PPs and CPs can undergo OS in SA suggests that the operation involved is an instance of A'-movement.<sup>6</sup>

As it turns out, there is a set of diagnostic tests that we can apply to determine if a particular instance of displacement is caused by A-movement or A'-movement. In particular, three such tests are used in the literature on OS: (i) whether or not the movement licenses parasitic gap constructions, (ii) whether or not the movement

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<sup>6</sup> That non-nominal categories might be targets for A-movement has been argued in the relevant literature. PPs, for example, have been assumed to undergo movement to SpecTP in the so-called locative inversion (LI) constructions (e.g., *Down the hill rolled the baby carriage*). See, for example, Collins (1997); also for an elaborate discussion of LI, see Soltan (2003b) and references cited there.

creates new binding relations, and (iii) whether or not the movement gives rise to weak crossover effects. Before I apply these tests to OS data in SA, it is worth noting, however, that the use of these tests does not necessarily lead to definitive conclusions as to the nature of the movement involved. In fact, Thráinsson (2001) shows how these tests do not provide conclusive evidence for the status of OS in Icelandic or Object Scrambling in Dutch and German. In what follows I reach the same conclusion with regard to OS in SA, thereby forcing us to look for another test to determine the type of movement involved in OS in this language.

#### 3.4.2.1 Parasitic gaps (PGs)

One syntactic difference between A-movement and A'-movement is that only the latter, but not the former, can license PG constructions, as the following contrast from English shows, where *t* stands for a trace, and *e* indicates the parasitic gap site:

- (45) a. Which book did you publish *t* after you read *e*?  
       b. \*This book was published *t* after you read *e*.

While a PG construction is possible in (45a) in the presence of wh-movement, an A'-movement, this is not possible in (45b) since the passive movement involved is an instance of A-movement. In the absence of bona fide A-movement constructions in SA, it is not clear if we can determine whether this is a reliable test for the status of OS in the language. To make things worse, PG constructions are marginal at best (see Soltan 1996 for discussion of PGs in SA). Let us, however, look at the data, and see if they can tell us anything about the status of OS in the language.

SA does use the gap-strategy in forming wh-questions in simple clauses (the operation is, however, marked if extraction is out of an embedded clause). Consider the following example:

- (46)      ?ayy-a            maqaalat-in    našara-t            Hind-u?  
              which-ACC   article-GEN   publish-3sgfem   Hind-NOM  
              “Which article did Hind publish?”

Since this is a standard case of A'-movement, we predict that PGs should be licensed, which seems to be the case, ignoring the already noted marginality of PG constructions in general:

- (47)      ?? [?ayy-a    maqaalat-in<sub>i</sub>    [našara-t            Hind-u     $t_i$   
              which-ACC   article-GEN   publish-3sgfem       Hind-NOM  
              [duuna            ?an            turaazîŷ-a  $e_i$ ]]]?  
              without        C                review.3sgfem.SUB  
              “Which article did Hind publish without reviewing?”

As it turns out, however, PGs may also occur in other types of constructions, even when no movement appears to be involved:

- (48)      ?? našara-t            Hind-u            ?al-maqaalat-a<sub>i</sub>    duuna  
              publish-3sgfem   Hind-NOM   the-article-ACC   without  
              an    turaazîŷ-a  $e_i$  ?  
              C    review.3sgfem.SUB  
              “Hind published the article without reviewing (it).”

There is no distinction in grammatical status between (47) and (48), thereby suggesting that the PG test cannot tell us whether movement is involved in a structure, let alone the type of movement involved. As we should expect, the OS structure in (49), is no better or worse than the non-OS structure in (48):



- (49) ?? našara-t            ʔal-maqaalat-a<sub>i</sub>    Hind-u            duuna  
 publish-3sgfem    the-article-ACC    Hind-NOM    without  
 an    turaaziʔ-a e<sub>i</sub> ?  
 C    review.3sgfem.SUB  
 “Hind published the article without reviewing (it).”

I conclude then that the PG test does not help us in determining whether OS in SA is an instance of A- or A'-movement.

### 3.4.2.2 Binding relations

Another distinction that is typically made between A- and A'-movement has to do with binding relations. It is generally assumed that A'-movement cannot create new binding relations or destroy old ones (Thráinsson 2001), whereas A-movement does:

- (50) a. Himself<sub>i</sub>, John likes *t<sub>i</sub>*.  
 b. The men<sub>i</sub> seem to each other<sub>i</sub> [*t<sub>i</sub>* to like Mary].

While topicalizing the object in (50a), an instance of A'-movement, does not change the binding relation for the reflexive, A-movement of the embedded subject in (50b) does allow the reciprocal to become bound, a relation that did not exist prior to subject raising.

Now, back to the OS facts in Arabic. Consider first the case of OS of a reflexive object, as in the following examples from Ouhalla (1994):

- (51) a. qatala            ʔal-waziir-u            nafs-a-hu  
 killed.3sgmas    the-minister-NOM    self-ACC-his  
 “The minister killed himself.”

- b. qatala                nafs-a-hu            ?al-waziir-u  
       killed.3sgmas    self-ACC-his    the-minister-NOM  
       “The minister killed himself.”

As we can see, the preservation of the binding relation between the shifted reflexive and the postverbal subject in (51b) indicates that OS does not change binding relations, which means that the movement involved is probably an instance of A'-movement, like topicalization in the English example in (50) above.

The same retention of binding relations takes place when the object contains a pronoun that is co-referential with the subject. In both the OS and non-OS structures, co-reference remains possible:

- (52) a. Daraba            Zayd-un            ?axaa-hu  
           hit.3sgmas    Zayd-NOM    brother.ACC-his  
           “Zayd hit his brother.”
- b. Daraba            ?axaa-hu            Zayd-un  
           hit.3sgmas    brother.ACC-his    Zayd-NOM  
           “Zayd hit his brother.”

So, once again, OS does not seem to create new binding relations or destroy old ones, leading to the same conclusion that it is an instance of A'-movement.<sup>7</sup>

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<sup>7</sup> An interesting asymmetry arises, however, in sentences where the subject contains a pronominal that is co-referential with the object, as in (i) below:

- (i) a. Daraba            axuu-hu<sub>i/j</sub>            Zayd-an<sub>i</sub>  
           hit.3sgmas    brother.NOM-his    Zayd-ACC  
           “His<sub>j</sub> brother hit John<sub>i</sub>.”
- b. Daraba            Zayd-an<sub>i</sub>            axuu-hu<sub>i/j</sub>  
           hit.3sgmas    Zayd-ACC            brother.NOM-his  
           “His<sub>i/j</sub> brother hit John<sub>i</sub>.”

Here, we see that a binding relation between the pronoun and the object that is impossible in the non-OS structure in (ia), now becomes possible after OS applies in (ib). This might look like a case where OS creates a new binding relation, therefore suggesting that it is an instance of A-movement. Notice,

### 3.4.2.3 Weak crossover test

A-movement is typically assumed not to give rise to weak crossover (WCO) effects, whereas A'-movement does. Remember, however, that in absence of a standard case of A-movement in the language (like passive or raising), we cannot know for sure if this is the case. In fact, if the analysis presented in Chapter 2 is correct, then the following subject wh-question is an instance of A'-movement, whether or not the wh-phrase stops in SpecTP on the way to SpecCP, or if it moves in one fell swoop to SpecCP:

- (53) [CP man<sub>i</sub> [TP t<sub>i</sub> yuhibb-u [v\*P t<sub>i</sub> umm-a-hu<sub>i</sub>]]]  
 who love.3sgmas mother-ACC-his  
 “Who<sub>i</sub> loves his<sub>i</sub> mother?”

If the movement involved in (53) is exclusively an A'-movement (as would be predicted under the analysis presented here), one may conclude that A'-movement does not give rise to WCO effects. This gains support from the fact that topicalization, a prototypical A'-movement, does not seem to give rise to WCO:

- (54) ?? Zayd-an<sub>i</sub> tuhibb-u umm-u-hu<sub>i</sub> t<sub>i</sub>  
 Zayd-NOM love.3sgfem mother-NOM-his  
 “Zayd<sub>i</sub>, his<sub>i</sub> mother loves.”

---

however, that it is the ungrammaticality of (ia) on the co-reference reading that is unexpected. After all, this is acceptable in other languages, e.g., the English sentence in (ii):

- (ii) His<sub>i</sub> mother loves John<sub>i</sub>.

Fassi Fehri (1993) takes the impossibility of pronoun binding in examples like (ia) to argue that binding of pronouns in SA has to make reference, not only to c-command, but also to linear precedence. In particular, he argues that the antecedent of a pronoun has to precede the pronoun in linear order for co-reference to obtain, a situation reminiscent of Barss and Lasnik's (1986) suggestion for binding and other properties in double object constructions in English. Whatever the correct explanation of the binding facts in (i) turns out to be, it is clear that the change in binding relations in (ib) is affected by another intervening factor (linear order, if Fassi Fehri is right), hence does not provide evidence that the movement involved is an instance of A-movement. I will come back to discuss the contrast in (i) in the next subsection.

Notice that the marginality of the sentence in (54) is probably due to the use of the gap-strategy, which is a marked option in topicalization structures even in simple clauses, and not to a WCO effect. The sentence would be still marginal, even if we replace the subject *umm-u-hu* (= his mother) by a proper noun like *Hind-u*:

- (55) ?? Zayd-an<sub>i</sub> tuhibb-u Hind-u t<sub>i</sub>  
 Zayd-NOM love.3sgfem Hind-NOM  
 “Zayd, Hind loves.”

So, what happens in OS constructions? In fn. 7, I point to cases of OS where the direct object moves across a subject that includes a pronominal co-referential with that object. The data are repeated below:

- (56) a. Daraba axuu-hu\*<sub>i/j</sub> Zayd-an<sub>i</sub>  
 hit.3sgmas brother.NOM-his Zayd-ACC  
 “His<sub>j</sub> brother hit John<sub>i</sub>.”
- b. Daraba Zayd-an<sub>i</sub> axuu-hu<sub>i/j</sub>  
 hit.3sgmas Zayd-ACC brother.NOM-his  
 “His<sub>i/j</sub> brother hit John<sub>i</sub>.”

Even though the movement of the object in (56b) does not give rise to WCO effects, we can not conclude that OS is an instance of A-movement. OS could still be an A'-movement, given that A'-movement does not induce WCO effects in the language in general, as shown by the data in (53) and (54) above. In short, the grammaticality of the OS construction in (56b) does not tell much about the status of the movement involved.

I conclude then that the grammaticality of OS across a subject that contains a pronoun co-referential with the shifted object does not necessarily mean that OS is a

case of A-movement. Since there is no conclusive evidence from the language that A'-movement gives rise to WCO effects, it is not clear if the WCO test can lead us to any definitive conclusion.

To sum up the discussion so far, it seems that the standard tests for the A-A' distinction do not lead to a clear conclusion as to the status of OS in SA. This is not quite surprising, since as noted before, such tests typically give rise to conflicting evidence, as Thráinsson (2001) points out for OS in Icelandic and Object Scrambling for Dutch and German. If so, then we have to find another test or tests to help us determine the type of movement OS is in SA. In the next section, I use the “intervention” test for this purpose. SA, unlike Icelandic, allows objects to shift across other objects, hence providing us with an opportunity to see if intervention effects arise with other instances of A'-movement. The perfect case to test this is constructions with two objects, that is, double object constructions. I discuss this next.

#### **3.4.2.4 Intervention effects in Double object constructions**

Consider the following SA double object construction, where the indirect object (IO) typically precedes the direct object (DO) in surface structure:

- (57)    ʔaʕTaa            Zayd-un        ʔal-awlaad-a    ʔal-kitaab-a  
              gave.3sgmas   Zayd-NOM   the-boys-ACC   the-book-ACC  
              “Zayd gave the boys the book.”

Topicalization of either object is allowed, with markedness of status probably due to the use of the gap-strategy, as noted earlier:

- (58) a. ? ʔal-awlaad-a ʔaʕTaa Zayd-un ʔal-kitaab-a  
the-boys-ACC gave.3sgmas Zayd-NOM the-book-ACC  
“The boys, Zayd gave (them) the book.”
- b. ? ʔal-kitaab-a ʔaʕTaa Zayd-un ʔal-awlaad-a  
the-book-ACC gave.3sgmas Zayd-NOM the-boys-ACC  
“The book, Zayd gave (it) the boys.”

Now, the question is: What happens if we topicalize one object across another object that has already undergone OS? As it turns out, the resulting sentences considerably degrade in acceptability:

- (59) a. ?\* ʔal-awlaad-a ʔaʕTaa ʔal-kitaab-a Zayd-un  
the-boys-ACC gave.3sgmas the-book-ACC Zayd-NOM  
“The boys, Zayd gave (them) the book.”
- b. ?\* ʔal-kitaab-a ʔaʕTaa ʔal-awlaad-a Zayd-un  
the-book-ACC gave.3sgmas the-boys-ACC Zayd-NOM  
“The book, Zayd gave (it) the boys.”

If OS of one object were A-movement, it then becomes unclear why A'-movement of the other object should lead to ungrammaticality.

The same effect seems to arise with object wh-extraction as well. While extraction of either object across the other is fine (60a, b), wh-extraction of one object across another that has undergone OS degrades considerably (61a, b):

- (60) a. man ʔaʕTaa Zayd-un ʔal-kitaab-a?  
who gave.3sgmas Zayd-NOM the-book-ACC  
“Who did Zayd give the book (to)?”

- b.    maaḏaa    ʔaʕTaa            Zayd-un        ʔal-awlaad-a?  
          what        gave.3sgmas    Zayd-NOM    the-boys-ACC  
          “What did Zayd give the boys?”
- (61) a.    ʔ\* man    ʔaʕTaa            ʔal-kitaab-a        Zayd-un?  
          who        gave.3sgmas    the-book-ACC    Zayd-NOM  
          “Who did Zayd give the book (to)?”
- b.    ʔ\* maaḏaa    ʔaʕTaa            ʔal-awlaad-a        Zayd-un?  
          what            gave.3sgmas    the-boys-ACC    Zayd-NOM  
          “What did Zayd give the boys?”

Once again, if OS were an instance of A-movement, it is not clear why it should intervene with wh-movement. I conclude then that intervention effects in double object constructions between OS and other instances of A'-movement like topicalization and wh-movement provides good evidence that OS is indeed an instance of A'- movement.

To sum up the discussion of OS in this section, the standard tests of the A-A' distinction provide evidence, albeit inconclusive, that OS is not an A-movement operation in SA. Meanwhile, the interpretive effects of OS as well as its application to PPs and CPs, in addition to NPs/DPs, seem to suggest that this is an instance of A'-movement to the periphery of the  $v^*P$  domain. The intervention effects in double object constructions, however, show clearly that OS has to be treated as A'-movement, or the degradation in grammaticality of sentences that involve topicalization or wh-movement across a shifted object remains unexplained. I take this as evidence that the operation causing OS in SA is indeed an A'-movement. If correct, then we have yet another reason to believe that the language does not have A-movement altogether.

### 3.5 Chapter Summary

In this chapter, I have discussed three types of constructions that have been typically assumed to involve A-movement in natural languages: passivization, subject raising, and object shift. I have provided empirical evidence that an A-movement analysis of passives in SA is untenable, given that subjects of passives verbs do not have to move, and can agree with the verb and get Case-assigned in situ. Passive sentences in which a preverbal DP occurs have also been shown to be cases of base-generated left dislocation, on par with all SV structures in the language in general, as argued throughout this thesis. Raising predicates, on the other hand, select a finite CP, thereby indicating the implausibility of a movement analysis, under minimalist assumptions of ‘case freezing’ effects and phase impenetrability. Empirical evidence also shows that the preverbal DP in a raising construction can be associated with a resumptive pronoun inside islands, thereby indicating that it cannot have arrived at its surface position via movement.

I have also shown that in raising constructions, where Agree cannot take place due to the opacity of its domain, default agreement will always be manifest on the verb, regardless of whether there is a preverbal DP in the matrix clause. The same obligatory default agreement arises in cases of P-passives, where the Theme argument is a PP, another case of opacity, this time induced by Case being assigned internal to the PP. I have also shown that even in these cases of opacity, agreement and Case-assignment could become available if there is another target for Agree in the structure, which is the case in constructions with verbs of deontic modality and possessive/locative predicates.



Finally, I have discussed the phenomenon of object shift in SA, showing that while most evidence is inconclusive as to the status of the movement involved, intervention effects with topicalization and wh-extraction in double object constructions show that OS has to be treated as A'-movement, and not as A-movement.

If the analysis of the data presented here is indeed correct, this provides further evidence for one of the main themes in this thesis that SA is a language without A-movement operations. It remains, however, to look at one more case of displacement that has been typically treated as A-movement as well: *raising-to-object* constructions. I do this in the next chapter.

## Chapter 4

### On agreement and accusative case assignment in Raising-to-Object constructions in Standard Arabic

In Chapter 2, I proposed an analysis of Arabic simple clauses, whereby no A-movement is involved in the derivation of SV orders. Rather, the preverbal DP in such structures is base-generated in its surface position (in the Spec of the highest functional category below C), with the  $v^*P$ -internal subject position being occupied by the null subject *pro* that is bound by this peripheral DP, in what has been described as a left dislocation (LD) structure. There is good empirical evidence from semantic properties of SV structures, wh-extraction, case facts, the behavior of idioms, and overt resumption in Experiencer PP subjects as well as within coordinate structure islands, that this analysis is indeed correct. In Chapter 3, we have seen that the same holds of passive and raising-type structures in the language. Neither passive movement nor subject-to-subject raising exists in SA (nor in any other dialects I know of for that matter); rather, the same LD analysis extends naturally to these structures, clearly indicating that this is a language without A-movement operations in these particular constructions. To test this hypothesis, I have discussed the properties of object shift constructions, showing that the movement involved induces minimality effects for other prototypical A'-movements such as topicalization and wh-extraction. In this chapter, I consider a few more constructions where A-movement is typically posited in languages like English, showing again that the LD analysis extends to these as well. The general conclusion is yet again that SA does not have A-movement.

#### 4.1 Raising-to-Object constructions

A number of languages have been noted to include a construction where a matrix verb seems to assign accusative case to what looks like an argument of the embedded verb, in a manner similar to Exceptional Case-Marking (ECM) constructions in languages like English, as in the examples below:

- (1) a. We believe her to be a genius.  
b. I wanted him to leave.

In both (1a) and (1b) the thematic subject of the embedded infinitival clause appears with accusative case assigned by the matrix ECM verb. The standard analysis for ECM constructions is that the matrix verb subcategorizes for a TP, hence no CP barrier would block case-marking to the embedded subject, which cannot be assigned Case internal to the embedded TP, given that infinitival T is  $\phi$ -defective. The structure has also been argued to involve the raising of the subject of the embedded clause to an object-like position of the matrix clause, either overtly, as in Postal 1974, Johnson 1991, Koizumi (1993, 1995), Runner (1995, 1998), Lasnik (1999, 2001), or covertly at LF, as in Chomsky 1993, and subsequent minimalist literature.

A number of languages have been cited as having a similar construction to ECM structures in English, where accusative case is assigned by the matrix verb to what seems to be an argument of the embedded verb. Kuno (1976) first observed that for Japanese and the facts are revisited in Hiraiwa (2001) and Tanaka (2002); Davies (2005) discusses the phenomenon in Madurese; similar facts have been noted for Greek in Kakouriotis (1980), Philippaki-Warbuton (1987), Hadjivassiliou *et al* (2000), and Kotzoglou (2001); Bruening (2001) provides an analysis of the

phenomenon in Passamaquoddy as well as Japanese; the same construction has also been observed for Korean in Hong (1990) and Schütze (2001), and for Turkish in Zidani-Eroglu (1997) and Moore (1998); as well as in a few other languages. Following these authors and others, I will call such structures *raising-to-object* (RTO) constructions from now on, noting in passing that the term is not meant to reflect what I take to be the correct analysis of these constructions. As the reader will notice later on, I will argue that such structures in SA do not involve raising to object, nor any movement for that matter.

In what follows, I discuss RTO with data from SA. In particular, I focus on RTO constructions that occur with three types of verbs: verbs of desire/expectation like *ʔaraada* (= want) and *tawaqqa ʃa* (= expect); verbs of “hearts,” as they are called in Arabic traditional grammar, e.g., *ǧanna* (= believe) and *xaala* (= imagine); and verbs of perception, such as *raʔaa* (= see) and *sami ʃa* (= hear). I illustrate the three types in the sentences in (2a, b, and c), respectively.

- (2) a.    ʔaraad-a            Zayd-un        ʔal-ʔawlaad-a    ʔan    yarʔal-uu  
           wanted.3sgmas    Zayd-NOM    the-boys-ACC    C     leave-3plmas  
           “Zayd wanted the boys to leave.”
- b.    ǧanna-a            Zayd-un        ʔal-ʔawlaad-a    raʔal-uu  
           believed.3sgmas    Zayd-NOM    the-boys-ACC    left-3plmas  
           “Zayd believed the boys to have left.”
- c.    raʔaa            Zayd-un        ʔal-ʔawlaad-a    yaʔab-uun  
           saw.3sgmas    Zayd-NOM    the-boys-ACC    play-3plmas  
           “Zayd saw the boys play.”

In each of the examples in (2), the DP *ʔal-awlaad-a* appears in accusative case, even though it looks to be thematically related to the embedded verb in each. Notice that there are syntactic differences between the three types of structures, however.

- First, while *ʔaraada* has to be followed by an embedded clause introduced by the complementizer *ʔan*, there is no such (overt) C introducing the embedded clause following *ǰanna* and *raʔaa*.
- Second, while the verb in the embedded clause following *ʔaraada* and *raʔaa* appears in the imperfective (i.e., non-tensed) form, the verb in the embedded clause following *ǰanna* is tensed.
- Third, notice also that in the three types of constructions in (2), the embedded verb always carries agreement features.
- Notice, finally, that while the RTO structure with *ʔaraada*-type verbs has a non-RTO variant in which the accusative DP appears postverbally with nominative case, as in (3a) below, this is not possible with *ǰanna*-type and *raʔaa*-type verbs, as the ungrammaticality of (3b) and (3c) shows:

- (3) a.    *ʔaraad-a*            *Zayd-un*        *ʔan* *yarħal-a*            *ʔal-ʔawlaad-u*  
           wanted.3sgmas    Zayd-NOM    C    leave.3plmas-SUB    the-boys-NOM  
           “Zayd wanted the boys to leave.”
- b.    \**ǰanna*            *Zayd-un*        *raħala*            *ʔal-ʔawlaad-u*  
           believed.3sgmas    Zayd-NOM    left.3plmas    the-boys-NOM  
           “Zayd believed the boys to have left.”

- c. \*raʔaa                      Zayd-un              yalʕab-u              ʔal-ʔawlaad-u  
          saw.3sgmas              Zayd-NOM              play-3sgmas              the-boys-NOM  
          “Zayd saw the boys play.”

RTO constructions raise a few interesting questions: First, where is the accusative DP located: in the matrix clause or in the embedded? Second, does it arrive at its surface position via movement or is it base-generated there? Third, how does it get accusative case? In the relevant literature, one can distinguish two main approaches to the phenomenon: (a) *raising*, be it overt or covert or copy raising<sup>1</sup>, where the accusative DP starts in the thematic domain of the embedded clause and then moves to a higher position, either within the embedded clause, or in the matrix clause. and (b) *prolepsis*, which is a non-movement account for RTO structures, whereby the accusative DP is base-generated in its surface position while being linked to a null or overt resumptive pronominal in the thematic domain of the embedded clause.<sup>2</sup>

In this chapter I discuss each of the three types of RTO constructions in Arabic, showing that they do not involve raising, in consistency with the claims made in this thesis that SA does not have A-movement operations. Rather, I argue that RTO constructions are proleptic, i.e., the result of base-generating a lexical DP, either in the matrix clause, or in the left periphery of the embedded clause, thereby making it accessible for accusative case assignment by the matrix verb.

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<sup>1</sup> Copy raising differs from raising in leaving a pronominal copy, rather than a trace, of the raised DP behind, as in (i) below:

(i) John seems like he loves basketball.

Copy raising has been suggested for several languages, including English (Rogers 1971), Irish (McCloskey and Sells 1988), Greek (Joseph 1976), and several others. More recently, Potsdam and Runner (2001) argue for a base-generation analysis of such constructions in English. Fujii (2005) provides an A-movement analysis for such constructions where the subject of the matrix clause is nonthematic.

<sup>2</sup> See Davies (2005) and references cited there for the prolepsis approach.

## 4.2 *ʔaraada*-type RTO constructions

The first type of RTO constructions in SA occurs in sentences whose matrix verb is *ʔaraada* (= want) and *tawaqqaʔa* (= expect):

- (4) a. ʔaraad-a            Zayd-un        ʔal-ʔawlaad-a    ʔan    yarħal-uu  
           wanted.3sgmas    Zayd-NOM    the-boys-ACC    C     leave-3plmas.SUB  
           “Zayd wanted the boys to leave.”
- b.    tawaqqaʔa            Zayd-un        ʔal-ʔawlaad-a    ʔan    yarħal-uu  
           expected.3sgmas    Zayd-NOM    the-boys-ACC    C     leave-3plmas.SUB  
           “Zayd expected the boys to leave.”

The embedded clause is of the subjunctive type, where the verb appears in the imperfective non-tensed form, but with full agreement features. The accusative DP appears in the position preceding the embedded C. We have already mentioned in our discussion of ECM constructions in languages like English that it is the defectiveness of embedded infinitival T in such languages that is assumed to force the ECM subject to acquire its case from the matrix verb. But given the SA data in (4), it is not clear if we can extend this ECM analysis to these RTO constructions, since the embedded subjunctive T shows full agreement. One solution is to suggest that subjunctive T in SA, while  $\phi$ -active, is tense-deficient, hence unable to assign Case. Recall, however, that there is a non-RTO variant of the sentences in (4), where a nominative DP appears in postverbal position inside the subjunctive clause, thereby suggesting that subjunctive T is indeed able to assign nominative case:

- (5) a. ʔaraad-a            Zayd-un        ʔan    yarħal-a                    ʔal-ʔawlaad-u  
           wanted.3sgmas    Zayd-NOM    C     leave.3sgmas-SUB    the-boys-NOM  
           “Zayd wanted the boys to leave.”

- b.    tawaqqaʃa            Zayd-un        ʔan    yarʔal-a                    ʔal-ʔawlaad-u  
          expected.3sgmas   Zayd-NOM   C    leave.3sgmas-SUB   the-boys-NOM  
          “Zayd expected the boys to leave.”

This is true of all subjunctive clauses, not just the RTO ones. For example, the semantically related verbs *tamannaa* (= wish), *raʔiba* (= desire), and *tanabbaʔa* (= predict) appear only in the non-RTO structure, with a postverbal nominative subject:<sup>3</sup>

- (6) a.    tamannay-tu    ʔan    yarʔal-a                    ʔal-ʔawlaad-u  
          wished-1sg    C    leave.3sgmas-SUB   the-boys-NOM  
          “I wished that the boys leave.”
- b.    raʔib-tu            ʔan    yarʔal-a                    ʔal-ʔawlaad-u  
          desired-1sg   C    leave.3sgmas-SUB   the-boys-NOM  
          “I wanted the boys to leave.”
- c.    tanabbaʔ-tu    ʔan    yarʔal-a                    ʔal-ʔawlaad-u  
          predicted-1sg   C    leave.3sgmas-SUB   the-boys-NOM  
          “I predicted that the boys leave.”

The fact that subjunctive T is  $\phi$ -active and does assign nominative case presents an obvious problem to a raising analysis of *ʔaraada*-type RTO constructions, since if the accusative DP can get case-assigned in postverbal position, why would it need to raise? As it turns out, there is also empirical evidence showing that the accusative DP in *ʔaraada*-type constructions does not arrive at its surface position via movement out of the thematic domain; rather, it has to be base-generated in that surface position.

For one thing, if the accusative DP were raised out of the embedded clause, then we should expect idiomatic readings to be available, which is not the case:

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<sup>3</sup> The fact that verbs that roughly mean the same cannot function in the same way suggests that the difference has to be lexical, in terms of subcategorization properties, for example.



- (7) a. tawaqqaʕ-tu    ʔan    takuun-a                    yad-u-hu                    maʕluulat-an  
 expected-1sg    C    be.3sgmas-SUB    hand-NOM-his    shackled-ACC

Literally: “I expected his hand to be tied.”

Idiomatically: “I expected him to be stingy.”

- b. tawaqqaʕ-tu    yad-a-hu                    ʔan    takuun-a                    maʕluulat-an  
 expected-1sg    hand-ACC-his    C    be.3sgmas-SUB    shackled-ACC

Literal meaning only: “I expected his hand to be tied.”

In the RTO construction in (7b), only the literal reading is available, which would be surprising under a raising analysis.

Similarly, the accusative DP following an *ʔaraada*-type can be associated with a resumptive pronoun inside a coordinate structure island in postverbal subject position, as in (8b), again showing that raising cannot be involved in the derivation of such sentences:<sup>4</sup>

- (8) a. tawaqqaʕ-tu    ʔan    yaʔtiy-a                    Zayd-un                    wa-ʔaxuu-hu  
 expected-1sg    C    come.3sgmas-SUB    Zayd-NOM    and-brother-his

“I expected Zayd and his brother to come.”

- b. tawaqqaʕ-tu    Zayd-an    ʔan    yaʔtiyia                    huwwa  
 expected-1sg    Zayd-ACC    C    come.3sgmas-SUB    he  
 wa-ʔaxuu-hu

and-brother-his

“I expected Zayd and his brother to come.”

As we should expect, resumption is also obligatory if the embedded clause is a P-passive, as in (9) below:

<sup>4</sup> As mentioned in previous chapters, if resumption is treated as residue of movement operations, that argument then does not hold. There is good evidence, though, that “true resumption,” in the sense of Aoun *et al*, does exist in Arabic dialects. One should expect the same to hold in SA. Cf. Chapter 6 for a proposal on how to treat resumption within a non-movement analysis.

- b. tawaqqaŋ-tu    Zayd-an    ʔan    yuqbaD-a    ʔalaay-**hi**  
 expected-1sg    Zayd-ACC    C    arrest.PASS.3sgmas-SUB    on-him  
 “I expected Zayd to be arrested.”

the data below indicate:

- b. ? tawaqqaŋ-tu    Zayd-an    ?an    tatzawwaʒ-a-hu    Hind-u  
 expected-1sg    Zayd-ACC    C    marry.3sgfem-SUB-him    Hind-NOM  
 “I expected Hind to marry Zayd.”

While the subject of what may raise is a matter of debate, as Davies (2005) points out in his discussion of RTO constructions in Madurese, the absence of any restrictions on the accusative DP in the RTO constructions above should be “less surprising in the proleptic NP analysis,” since prolepsis structures are typically unconstrained with regard to the grammatical relation of the embedded pronoun bound by the accusative DP. Davies gives the following examples of English prolepsis for illustration:

- (12) a. Sheryl thought about/of Tim that the police would never catch him.  
 b. Sheryl imagined about/of Tim that Ed McMahon would award \$10 million to him.  
 c. Sheryl thought about/of Tim that his child lacked any discipline.

Given the evidence above from the behavior of idiom chunks, overt resumption in P-passives and coordinate structure islands, and the ability of the accusative DP to be associated with both subjects and nonsubjects, I conclude that the accusative DP following an *ʔaraada*-type verb does not arrive at its surface position via raising from within the embedded TP. Rather, it has to be base-generated in its surface position. The question now is: What is that surface position? Is it in the embedded clause still, or is it in the matrix clause? I discuss this next.

If the analysis given in the previous chapter for the SV-VS word order alternation is correct, then perhaps we can extend it to *ʔaraada*-type constructions. In particular, when the embedded clause appears in the VS order, subjunctive T Agrees and assigns nominative case to the postverbal subject in the usual fashion. In the SV order, by contrast, we may assume that the accusative DP is base-generated in a LD-ed position within the embedded clause, which then makes it accessible for accusative case assignment by the matrix verb, with the embedded subject position

now being occupied by *pro*. Notice, however, that for this analysis to work, the position of the accusative DP has to be somewhere below the edge of CP, since it follows the particle *ʔan*, which is arguably a C. But if so, then this DP should not be accessible to probing by heads from the matrix clause, given that it is now part of the complement domain of the embedded CP phase, not the edge. One way out is to deny the complementizer-status of *ʔan* and treat it instead like a Mood head, thereby allowing the accusative DP to be at the edge of the CP phase, now headed by a null C (see Soltan 1996 for an analysis along those lines). While this might solve the problem, I would like to argue here that the categorial status of *ʔan* is, in fact, a moot point, since there is good empirical evidence militating against base-generating the accusative DP of *ʔaraada*-type verbs within the embedded clause.

On the one hand, while the SV-VS alternation in the embedded clause between (4) and (5), repeated below as (13) and (14) for convenience, is tied to some subtle semantic difference, it does not seem to be of the same nature as that associated with word order alternation in simple clauses, i.e., it is not of thethetic-categorical type discussed in Chapter 2. Rather, the difference between both structures is more “thematic” in nature.

- (13) a. ʔaraad-a            Zayd-un        ʔal-ʔawlaad-a    ʔan    yarħal-uu  
           wanted.3sgmas    Zayd-NOM    the-boys-ACC    C     leave-3plmas.SUB  
           “Zayd wanted the boys to leave.”
- b.    tawaqqaʕa            Zayd-un        ʔal-ʔawlaad-a    ʔan    yarħal-uu  
           expected.3sgmas    Zayd-NOM    the-boys-ACC    C     leave-3plmas.SUB  
           “Zayd expected the boys to leave.”

- (14) a.   ʔaraad-a           Zayd-un       ʔan   yarħal-a           ʔal-ʔawlaad-u  
           wanted.3sgmas   Zayd-NOM   C    leave.3plmas-SUB   the-boys-NOM  
           “Zayd wanted the boys to leave.”
- b.   tawaqqaʕa       Zayd-un       ʔan   yarħal-a           ʔal-ʔawlaad-u  
           expected.3sgmas   Zayd-NOM   C    leave.3plmas-SUB   the-boys-NOM  
           “Zayd expected the boys to leave.”

In (13a, 14a), the Theme of the matrix verb is the embedded CP, a state of affairs. In (13b, 14b), the Theme of the matrix verb is still the embedded CP, a state of affairs, but the accusative DP also seems to function as a second thematic argument, call it Target. Semantically, the RTO construction has an interpretation in which the accusative DP is a Target of the event of wanting/expecting. As it turns out, the language has a structure that shows exactly that same meaning, where a Target DP appears within a dative PP in the matrix clause:

- (15) a.   ʔarad-tu       min   Zayd-in       ʔan   yarħal-a  
           wanted.1sg   from   Zayd-DAT   C    leave-3sgmas.SUB  
           “I wanted from the boys to leave.”
- b.   tawaqqaʕ-tu   min   Zayd-in       ʔan   yarħal-a  
           expected.1sg   from   Zayd-DAT   C    leave-3sgmas.SUB  
           “I expected from the boys to leave.”

Verbs that we saw earlier, which do not allow the RTO construction, do not have a parallel dative construction like the one in (15), as the ungrammaticality of the (b) sentences in (16) below indicates:

- (16) a.   tamannay-tu   ʔan   yarħal-a           ʔal-ʔawlaad-u  
           wished-1sg   C    leave.3sgmas-SUB   the-boys-NOM  
           “I wished that the boys leave.”

- b. \*tamannay-tu min ?al-?awlaad-i ?an yarḥal-uu  
 wished-1sg from the-boys-DAT C leave.3plmas-SUB  
 “I wished that the boys leave.”
- (17) a. raʕib-tu ?an yarḥal-a ?al-?awlaad-u  
 desired-1sg C leave.3sgmas-SUB the-boys-NOM  
 “I wanted the boys to leave.”
- b. \*raʕib-tu min ?al-?awlaad-i ?an yarḥal-uu  
 desired-1sg from the-boys-DAT C leave.3plmas-SUB  
 “I wanted the boys to leave.”
- (18) a. tanabbaʔ-tu ?an yarḥal-a ?al-?awlaad-u  
 predicted-1sg C leave.3sgmas-SUB the-boys-NOM  
 “I predicted that the boys leave.”
- b. \*tanabbaʔ-tu min ?al-?awlaad-i ?an yarḥal-uu  
 predicted-1sg from the-boys-DAT C leave.3plmas-SUB  
 “I predicted that the boys leave.”

The accusative DP in *?araada*-type constructions has a comparable, though certainly subtle, interpretation to that of the dative PP in (15). Davies (2005) points out again that this holds exactly in Madurese, and takes this as evidence in favor of a prolepsis analysis, in which the accusative DP is base-generated in the matrix clause where it can thematically relate to the matrix verb.

On the other hand, there is good empirical evidence from word order showing that the accusative DP is indeed in the matrix clause. For one thing, the accusative DP can precede a matrix clause adverbial:

- (19)      tawaqqaʕ-tu    Zayd-an      bil-ʔams-i    ʔan    yarħal-a  
              expected.1sg   Zayd-ACC   yesterday    C    leave-3sgmas.SUB  
              “Yesterday, I expected Zayd to leave.”

In (19), the time adverbial *bil-ʔams-i* may modify either the matrix or the embedded verb. On the matrix modification reading, one has to assume that the accusative DP must occupy a position in the matrix clause, since if it were in the embedded clause, we have no explanation for how it comes to precede a matrix clause adverbial.

Further evidence that this type of RTO construction is not the result of LD within the embedded clause comes from the fact that there is no definiteness requirement on the accusative DP:

- (20) a.    ʔarad-tu      ʔan    yaqraʔ-a                      Taalib-un      ʔal-qaSiidat-a  
              wanted.1sg    C    read-3sgmas.SUB    student-NOM    the-poem-ACC  
              “I wanted a student to read the poem.”
- b.    ʔarad-tu      Taalib-an      ʔan    yaqraʔ-a                      ʔal-qaSiidat-a  
              wanted.1sg    student-ACC    C    read-3sgmas.SUB    the-poem-ACC  
              “I wanted a student to read the poem.”
- (21) a.    tawaqqaʕ-tu    ʔan    yaħull-a                      Taalib-un      ʔal-masʔalat-a  
              expected.1sg    C    solve-3sgmas.SUB    student-NOM    the-problem-ACC  
              “I expected a student to solve the problem.”
- b.    tawaqqaʕ-tu    Taalib-an      ʔan    yaħull-a                      ʔal-masʔalat-a  
              expected.1sg    student-ACC    C    solve-3sgmas.SUB    the-problem-ACC  
              “I expected a student to solve the problem.”

The grammaticality of cases such as those in (20b, 21b) would be quite surprising if the accusative DP is a LD-ed element in the embedded clause, since indefinites are typically resistant to appearing in LD-ed positions, as noted in previous chapters.

Similarly, if the accusative DP is in an A'-position at the periphery of the embedded clause, we should expect it to give rise to a minimality violation if wh-extraction of an object wh-phrase takes place, which is not the case, as the grammaticality of the sentences in (22) shows:

- (22) a. maaḏaa tawaqqaʕ-ta ʔan yaʕʕal-a Zayd-un?  
 what expected.2sg C do-3sgmas.SUB student-NOM  
 “What did you expect Zayd to buy?”
- b. maaḏaa tawaqqaʕ-ta Zayd-an ʔan yaʕʕal-a?  
 what expected.2sg student-ACC C do-3sgmas.SUB  
 “What did you expect Zayd to buy?”

If the accusative DP, by contrast, is in a thematic position in the matrix clause, lack of intervention with wh-extraction is readily explained.

Given the above evidence, I would like to argue here that the accusative case-marked DP in *ʔaraada*-type constructions is, in fact, in the matrix clause. It remains, however, to determine where exactly in the matrix clause this DP is located. I discuss this next.

On the basis of parallel structures with dative PPs that we encountered earlier, I would like to argue here that the accusative DP is actually an argument of the matrix verb, carrying the same  $\theta$ -role that a dative PP in structures such as (24) below does:

- (23) a. ʔarad-tu min Zayd-in ʔan yarḥal-a  
 wanted.1sg from Zayd-DAT C leave-3sgmas.SUB  
 “I wanted from Zayd to leave.”



- b.    tawaqqaʃ-tu    min    Zayd-in    ʔan    yarħal-a  
       expected.1sg    from    Zayd-DAT    C    leave-3sgmas.SUB  
       “I expected from Zayd to leave.”

If so, then the accusative DP is not “exceptionally” case-marked in any way. Rather, it functions as a thematic argument of the matrix verb (which has the option of selecting this extra argument), and is assigned accusative in the regular fashion, under Agree with  $v^*$ .<sup>5</sup> In addition, it functions as a controller for the null or overt resumptive pronoun of the embedded clause through coindexation. *ʔaraada*-type verbs are not ECM verbs, therefore, and the constructions are best understood as cases of what is traditionally referred to as prolepsis.

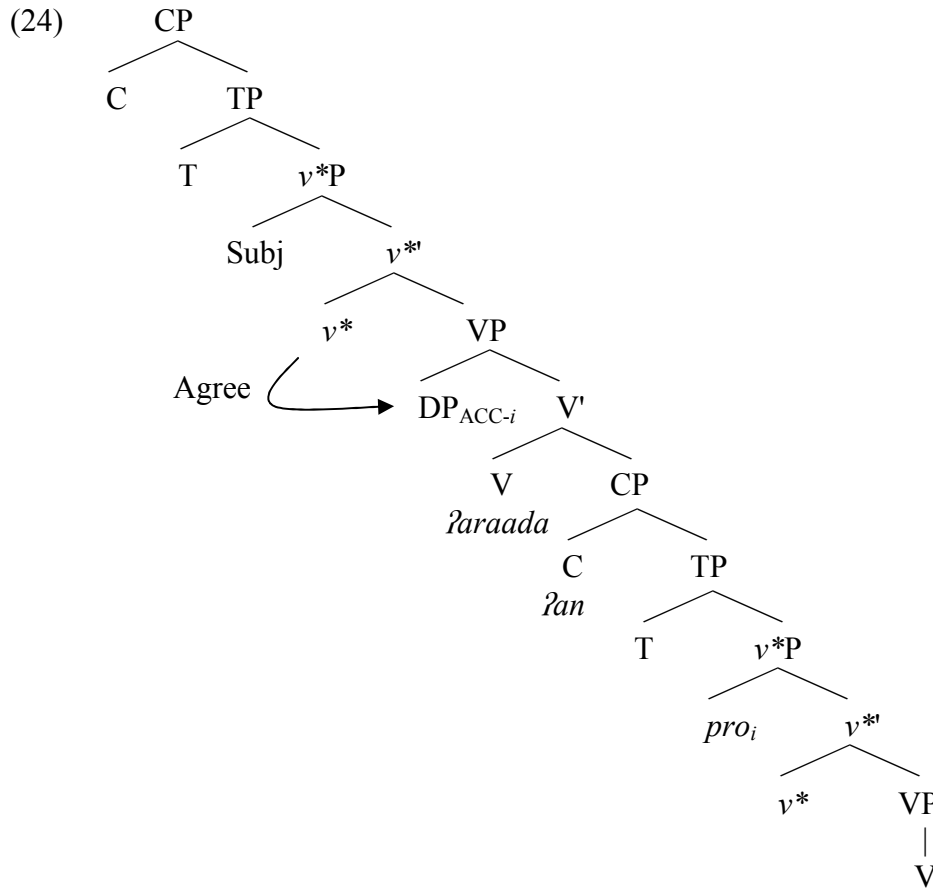
To sum up the discussion so far, *ʔaraada*-type RTO constructions are not ECM constructions. Rather, they are best understood as cases of prolepsis, where the accusative DP is actually base-generated in the matrix clause, while controlling a resumptive pronoun in the embedded clause. That this analysis is correct gains support from the existence of a thematically related structure with dative PPs, the position of the accusative DP with regard to adverbials, the fact that the accusative DP can be associated with both subjects and nonsubjects, definiteness effects, and interaction with *wh*-movement.

The next question to ask is: Where exactly in the matrix clause does the accusative DP sit? If the analysis of that DP as a thematic argument of the matrix verb is correct, we have to conclude that it must be located in the VP domain, perhaps as a

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<sup>5</sup> Another possibility is that the accusative DP is actually a complement of a null dative P, which is unable to assign case, hence allowing the matrix verb to assign accusative case to the complement of this null P. See Uriagereka (2006) for a proposal of case-assignment whereby case is assigned by Ps.

Specifier of matrix V. A tree of the skeletal structure of an *Ɂaraada*-headed RTO structure is given in (24):



As the tree in (24) shows, the accusative DP is base-generated in Spec of matrix V, while being coindexed with the null subject of the embedded CP. Since SA is a verb raising language, both matrix and embedded Vs undergo raising to  $v^*$  and T. This will generate the following word order, as desired:

(25)  $[V_{\text{matrix}} \text{ Subj } DP_{\text{ACC-}i} [C_{\text{Ɂan}} V_{\text{embedded}} pro_i]]$

Meanwhile, since the accusative DP is now in the lexical domain of the matrix clause, it will get its case assigned in the regular Agree fashion with  $v^*$ . While accusative case may also be assigned/checked under Spec-head agreement with  $v^*$ , there seems

to be good evidence that object shift of the accusative DP in this RTO construction is not possible, as the ungrammaticality of the sentences in (26) below indicates.<sup>6</sup>

- (26) a. \*ʔaraad-a            ʔal-ʔawlaad-a    Zayd-un            ʔan    yarħal-uu  
           wanted.3sgmas    the-boys-ACC    Zayd-NOM    C    leave-3plmas.SUB  
           “Zayd wanted the boys to leave.”
- b. \*tawaqqaʔa            ʔal-ʔawlaad-a    Zayd-un            ʔan    yarħal-uu  
           expected.3sgmas    the-boys-ACC    Zayd-NOM    C    leave-3plmas.SUB  
           “Zayd expected the boys to leave.”

This is rather surprising, since, descriptively, the language does allow object shift (OS), obligatorily for pronouns (28), and optionally for lexical definite DPs (27), with the usual interpretive effects of topicality/given information, etc., as discussed in detail in Chapter 2:

- (27) a. qaraʔa            Zayd-un            ʔal-kitaab-a  
           read.3sgmas    Zayd-NOM    the-book-ACC  
           “Zayd read the book.”
- b. qaraʔa            ʔal-kitaab-a            Zayd-un  
           read.3sgmas    the-book-ACC    Zayd-NOM  
           “Zayd read the book.”

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<sup>6</sup> As we should expect, if the accusative DP is a pronominal, then OS has to take place obligatorily. Accusative pronouns in SA are clitics and, therefore, they have to attach to a host via a (probably morphophonological) process of cliticization:

- (i) ʔaraad-a-hum            Zayd-un            ʔan    yarħal-uu  
       wanted.3sgmas-them    Zayd-NOM    C    leave-3plmas.SUB  
       “Zayd wanted them to leave.”
- (ii) tawaqqaʔa-hum            Zayd-un            ʔan    yarħal-uu  
       expected.3sgmas-them    Zayd-NOM    C    leave-3plmas.SUB  
       “Zayd expected them to leave.”

- (28) a. qaraʔa-hu          Zayd-un  
           read.3sgmas-it    Zayd-NOM  
           “Zayd read it.”
- b. \*qaraʔa          Zayd-un          -hu/huwwa  
           read.3sgmas    Zayd-NOM    it  
           “Zayd read it.”

As we should expect, the RTO verbs *ʔaraada* and *tawaqqaʔa*, when used in simple clauses with direct DP objects, do allow OS:

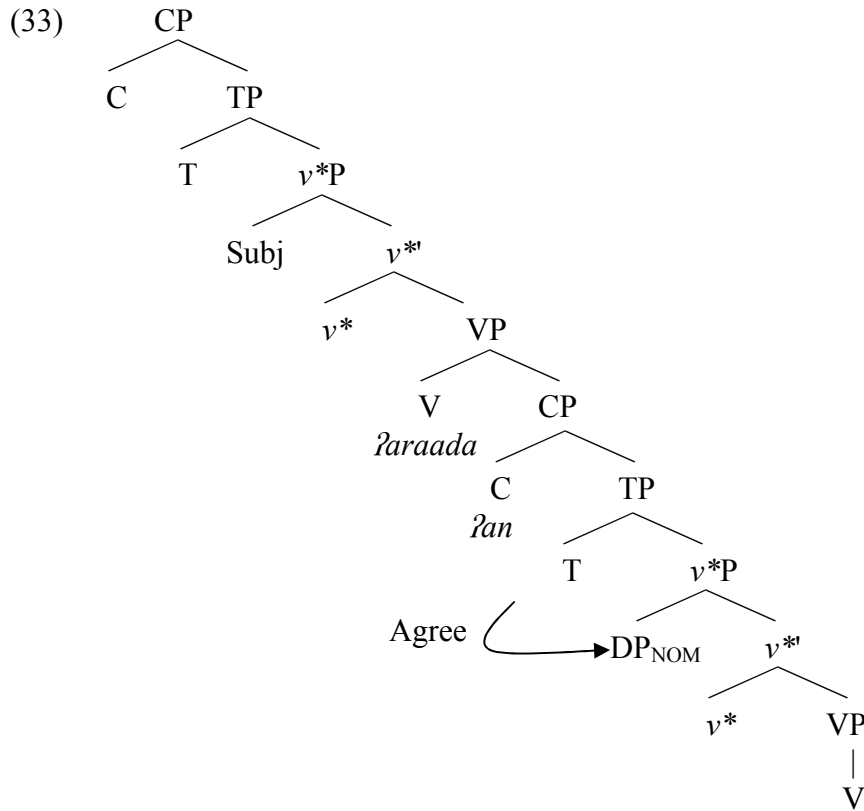
- (29) a. ʔaraada            Zayd-un          ʔal-kitaab-a  
           wanted.3sgmas    Zayd-NOM    the-book-ACC  
           “Zayd wanted the book.”
- b. ʔaraada            ʔal-kitaab-a      Zayd-un  
           wanted.3sgmas    the-book-ACC    Zayd-NOM  
           “Zayd wanted the book.”
- (30) a. tawaqqaʔa          Zayd-un          ʔal-naSr-a  
           expected.3sgmas    Zayd-NOM    the-victory-ACC  
           “Zayd expected victory.”
- b. tawaqqaʔa          ʔal-naSr-a          Zayd-un  
           expected.3sgmas    the-victory-ACC    Zayd-NOM  
           “Zayd expected victory.”

Notice that the accusative DP’s resistance to OS in (26) parallels the inability of dative PPs with this type of verbs to undergo OS, as the ungrammaticality of (31b, 32b) shows:

- (31) a. ?araad-a            Zayd-un        min    ?al-?awlaad-i    ?an    yarħal-uu  
           wanted.3sgmas    Zayd-NOM    from    the-boys-DAT    C    leave.3plmas-SUB  
           “Zayd wanted from the boys to leave.”
- b. \*?araad-a            min    ?al-?awlaad-i    Zayd-un        ?an    yarħal-uu  
           wanted.3sgmas    from    the-boys-DAT    Zayd-NOM    C    leave.3plmas-SUB  
           “Zayd wanted from the boys to leave.”
- (32) a. tawaqqaʿa            Zayd-un            min    ?al-?awlaad-i    ?an  
           expected.3sgmas    Zayd-NOM        from    the-boys-DAT    C  
           yarħal-uu  
           leave.3plmas-SUB  
           “Zayd expected from the boys to leave.”
- b. tawaqqaʿa            min    ?al-?awlaad-i    Zayd-un        ?an  
           expected.3sgmas    from    the-boys-DAT    Zayd-NOM    C  
           yarħal-uu  
           leave.3plmas-SUB  
           “Zayd expected from the boys to leave.”

While I do not currently have an explanation for the immobility of the accusative DP and dative PP in these constructions, what is relevant here, however, is that if the accusative DP cannot move in overt syntax, then it has to be assigned Case in situ. A theory of agreement that has Agree can directly account for that.

On the other hand, it remains to show how the non-RTO version of the structure in (24), where a postverbal nominative DP appears inside the embedded clause instead, differs from the RTO structure. As shown in the tree in (33), there are two main differences: First, the matrix V does not have an argument in its Spec; second, the embedded verb has an overt subject:



After verb raising applies in (33), the word order is as in (34):

(34) [V<sub>matrix</sub> Subj [C<sub>?an</sub> V<sub>embedded</sub> DP<sub>NOM</sub>]]

Recall that the embedded subjunctive T is  $\phi$ -active; hence, it is able to Agree and assign nominative case to the lexical DP in the embedded subject position.

In this section, I have shown that RTO constructions headed by an *?araada*-type verb in the matrix clause are, in fact, not ECM constructions like those in languages like English. Rather, they do have the syntactic and semantic properties of prolepsis structures, where the accusative case marked DP is base-generated as an extra argument of the matrix verb, carrying its own specific  $\theta$ -role, while being coindexed with a resumptive pronoun, typically *pro* in the subject position, in the embedded clause. Accusative case is assigned to that DP under Agree with  $v^*$  in the

### 4.3 *Ċanna*-type RTO constructions

(35)      ḏanna-a                      Zayd-un                      ʔal-ʔawlaad-a                      raḥal-uu  
                 believed.3sgmas                      Zayd-NOM                      the-boys-ACC                      left-3plmas  
                 “Zayd believed the boys left.”

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showing that this accusative nominal cannot be in the matrix clause. Instead, it has to be located in the embedded clause. If correct, the analysis provides further evidence in support of long-distance Case assignment.

The first piece of evidence against a prolepsis analysis of *ǧanna*-type verbs comes from the lack of any semantic or thematic distinction between RTO structures such as (35) and those where a full CP is selected, as in (36):

- (36)     *ǧanna*-a             Zayd-un        *ʔanna*   *ʔal-ʔawlaad*-a   *raħal*-uu  
              believed.3sgmas   Zayd-NOM   C        the-boys-ACC   left-3plmas  
              “Zayd believed that the boys left.”

The two sentences in (35) and (36) are semantically and thematically equivalent. Notice that the accusative case on the preverbal DP in the embedded clause of (36) is assigned by the complementizer, and not by the matrix verb. As mentioned before, C’s of the *ʔinna* type (and *ʔanna* is one of them) do assign (presumably lexical) accusative case to the following nominal. That *ǧanna*-type RTO structures do not have the semantic status of prolepsis structures is evidenced by the fact that, unlike *ʔaraada*-type structures, they do not have a parallel prolepsis structure with a dative PP, as the ungrammaticality of the sentences in (37) below shows:

- (37) a.     \**ǧanna*-a             Zayd-un        min     *ʔal-ʔawlaad*-i  
              believed.3sgmas   Zayd-NOM   from   the-boys-DAT  
              *raħal*-uu  
              left-3plmas  
              “\*Zayd believed of the boys that they had left.”





modify the embedded verb. If so, then the accusative DP cannot be in the matrix clause. If it were, then we have no explanation for why the matrix reading of the adverbial in (38b) is disallowed.

Further support of that conclusion comes from cases where two temporally conflicting adverbials are used in the sentence, one to modify the matrix verb, and the other to modify the embedded verb. If the accusative DP were in the matrix clause we should expect structures like these to be grammatical, regardless of the position of the DP with regard to the matrix clause adverbial. If, by contrast, the accusative DP is in the embedded clause, then we predict that such examples will be grammatical only if the matrix clause adverbial precedes the accusative DP. As it turns out, the facts show that it is the latter prediction that is borne out:

- (39) a. *ǰanan-tu bil-ʔams-i ʔal-ʔawlaad-a sa-ya-raħal-uun ʔadan*  
 believed.1sg yesterday the-boys-ACC FUT-leave-3plmas tomorrow  
 “I believed yesterday the boys to be leaving tomorrow.”
- b. *\*ʔǰanan-tu ʔal-ʔawlaad-a bil-ʔams-i sa-ya-raħal-uun ʔadan*  
 believed.1sg the-boys-ACC yesterday FUT-leave-3plmas tomorrow  
 “\*I believed the boys yesterday to be leaving tomorrow.”

As the contrast in (39) shows, there is a clear distinction in the status of the sentence with the adverbial before the accusative DP as opposed to the case when it follows that DP.

Another argument in support of the claim that the accusative DP following a *ǰanna*-type verb is not in the matrix clause comes from wh-extraction facts. As we have seen with *ʔaraada*-type constructions, prolepsis structures do not show

intervention by the accusative DP with wh-extraction (cf. the data in (22)). While the judgments here are rather subtle due to the markedness of the gap-strategy in forming wh-questions in general, there seems to be evidence that extraction of a wh-phrase across the accusative DP in a *ǰanna*-type RTO construction is disallowed:

- (40)     ?\*man   ta-ǰunn-u     ʔal-ʔawlaad-a   Darab-uu?  
           who     believe.2sg   the-boys-ACC   hit-3plmas  
           “Who do you believe the boys hit?”

With a resumptive pronoun in the wh-extraction site, thereby signaling lack of movement, the sentence becomes fully grammatical:

- (41)     man   ta-ǰunn-u     ʔal-ʔawlaad-a   Darab-uu-hu?  
           who     believe.2sg   the-boys-ACC   hit-3plmas-him  
           “Who do you believe the boys hit (him)?”

To summarize, given the absence of any semantic or thematic effects with *ǰanna*-type RTO constructions, the inability of the accusative DP in such constructions to precede matrix clause adverbials, and the presence of a comparable intervention effect with wh-extraction typical of LD structures, I conclude that the accusative DP is not in the matrix clause in this type of RTO constructions.

Now, if the accusative DP is not in the matrix clause, then it has to be in the embedded clause. Two questions arise: Where is it located in the embedded clause? And how does it arrive at that position? I start with the second question first.

One possible analysis of *ǰanna*-type RTO constructions would be to assume that the accusative DP raises from the subject position in the thematic domain of the embedded clause to a peripheral position, where it becomes accessible to case

assignment by the matrix V. As it turns out, there is good evidence that this is not the correct analysis.

One piece of evidence in support of a non-raising analysis of *ǰanna*-type RTO constructions comes from the fact that they do not preserve idiomatic readings, as in the case of the idiom “*yaTruq ʔal-ḥadiid-a wa-huwwa saaxin*” (= to strike the iron while it is hot):

- (42) a. ǰanan-tu      Zayd-an      sa-yaTruq-u      ʔal-ḥadiid-a  
           thought.1sg   Zayd-ACC   FUT-hit-3sgmas   the-iron-ACC  
           wa-huwwa    saaxin-un  
           and-it        hot-NOM  
           Literally and idiomatically: “I thought Zayd will strike the iron while it is hot.”
- b. ǰanan-tu      ʔal-ḥadiid-a      sa-yaTruq-u-hu      Zayd-un  
           thought.1sg   the-iron-ACC   FUT-hit-3sgmas-it   Zayd-NOM  
           wa-huwwa    saaxin-un  
           and-it        hot-NOM  
           Literally only: “I thought Zayd will strike the iron while it is hot.”

While (42a) can have either a literal or an idiomatic reading, (42b), where the object DP (*ʔal-ḥadiid-a*) of the idiom appears as the accusative DP of *ǰanna*, does not lend itself to an idiomatic reading.

Similarly, that fact that the accusative DP in *ǰanna*-type constructions may be associated not only with subjects, but also with nonsubjects, as shown by the sentences in (43) below, suggests that this accusative DP should be base-generated in its surface position and get linked to a resumptive pronoun in the thematic domain, in a LD structure:

- (43) a. *ǧanan-tu      Zayd-an      qaabala-hu      ʕaliyy-un*  
           believed.1sg   Zayd-ACC   met.3sgmas.him   Ali-NOM  
           “I believed about Zayd that Ali met him.”
- b. *ǧanan-tu      Zayd-an      maata      axuu-hu*  
           believed.1sg   Zayd-ACC   died.3sgmas   brother.NOM-his  
           “I believed about Zayd that his brother died.”

Similarly, the accusative DP, even when associated with the subject of the embedded clause, is resumed by an overt pronoun when the embedded clause has a P-passive or a postverbal conjoined subject:

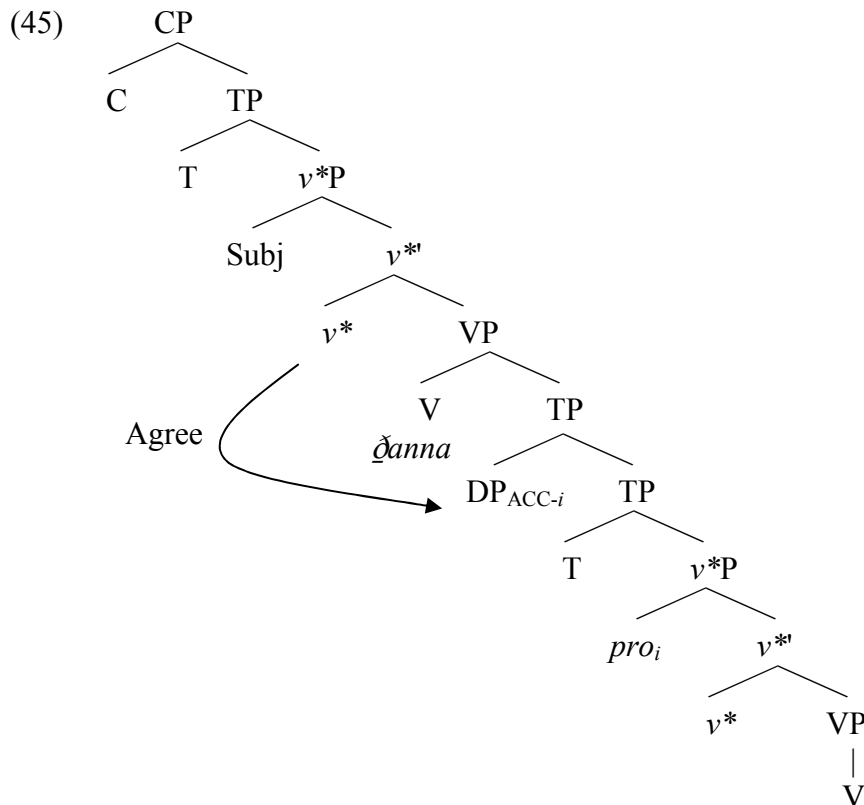
- (44) a. *ǧanan-tu      Zayd-an      qubiDa      ʕaliy-hi*  
           believed.1sg   Zayd-ACC   arrested.PASS.3sgmas   on-him  
           “I believed Zayd to have been arrested.”
- b. *ǧanan-tu      Zayd-an      haDara      huwwa      wa-axuu-hu*  
           believed.1sg   Zayd-ACC   came.3sgmas   he      and-brother.NOM-his  
           “I believed Zayd and his brother to have arrived.”

These facts are more compatible with a base-generation LD analysis like the one advanced here than with a raising analysis.

To sum up, given the lack of an idiomatic reading of the accusative DP in *ǧanna*-type RTO constructions, the fact that the accusative DP can be associated with both subject and nonsubject positions, as well as the occurrence of overt resumptive pronouns when the subject of the embedded clause is a PP in a P-passive structure or a conjoined DP, I conclude that the accusative DP in *ǧanna*-type sentences is base-generated in a peripheral position inside the embedded clause and A'-binds a

resumptive pronoun in the thematic domain. It remains, however, to determine what position that DP occupies.

Following the analysis I presented in Chapter 2, I will assume here that this peripheral position is the highest Spec above T and under C. For non-negative sentences without modality markers, let's assume this position to be SpecTP. Notice that the embedded clause of a *ǰanna*-type verb has no overt C, thereby, arguably, suggesting absence of a CP layer. If so, then there is no phase boundary between  $v^*$  and the highest DP in the embedded clause, and accusative case assignment should proceed via Agree.<sup>7</sup> Under these assumptions, the tree structure would be along the lines in (45), ignoring verb movement:



<sup>7</sup> Notice that there is an implicit assumption here that finiteness can be located in T. Alternatively, one may assume that C can be inserted at LF, an idea that has been suggested in several places. See Boskovic and Lasnik (1999) and references cited there.

Accusative case assignment is thus possible in *ǰanna*-type RTO constructions because the DP in embedded SpecTP is accessible for Agree with matrix  $v^*$ . Meanwhile, that DP A'-binds the resumptive (null) pronoun in the subject position of the embedded clause. If the analysis provided above is correct, then we have another case where Case has to be assigned at a distance, rather than in a Spec-head configuration. An Agree-based theory of agreement and case assignment can account for that.<sup>8</sup>

A potential problem arises, however, with the structure in (45). In particular, we should predict the presence of a version of that structure in which the accusative LD-ed DP appears instead in postverbal position with nominative case. The prediction, however, is not borne out. Compare (46a) and (46b) below:

- (46) a. *ǰanan-tu*      *Zayd-an*      *ħaDara*  
           believed.1sg    Zayd-ACC    came.3sgmas  
           ‘‘I believed Zayd to have come.’’
- b.    \**ǰanan-tu*      *ħaDara*      *Zayd-un*  
           believed.1sg      came.3sgmas    Zayd-NOM

The ungrammaticality of (46b) should be surprising, since embedded T is not only  $\phi$ -active, but is finite as well, hence should be able to assign nominative case to the postverbal subject. Instead, the only grammatical version of the structure is the RTO construction.

I would like to suggest here that the ungrammaticality of (46b) actually follows from the assumptions of formal feature licensing in minimalist syntax. As

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<sup>8</sup> Notice that I’m assuming here that Agree can take place with targets in A'-positions.

noted earlier (cf. fn. 9 in Chapter 1), under a strict interpretation of the Visibility Hypothesis, which requires Case-marking for  $\theta$ -marking, we should expect, as Uriagereka (2005, 2006) points out, that all arguments carry some sort of case. More specifically, Uriagereka argues that CP arguments should be assigned case, which, for him, is identified as the null case, originally proposed by Chomsky and Lasnik (1993). The advantage of this approach is to resolve an old problem for theories of formal feature licensing: How is it that heads that do not have DP arguments survive the derivation if their formal features remain unlicensed? For instance, how does the functional head  $v^*$  for a verb like *say*, when it c-selects a CP complement (e.g., *John said that he's happy*) checks its formal features. If clausal complements can also be assigned case, that problem does not arise.

If the above proposal is adopted, then the ungrammaticality of (46b) follows now from the failure of  $v^*$  to engage in any Agree relation to license its formal features. The postverbal DP is inactive after Agreeing with embedded T and getting nominative case assigned to it. Meanwhile, there is no CP complement for the lexical verb *ǰanna*. If so, then the derivation will crash due to the uninterpretability of the formal features on  $v^*$ . That this analysis is indeed correct can be inferred from cases where, despite the postverbal positioning of a subject DP, the sentence is still grammatical, due to the presence of another LD-ed DP in SpecTP. Since now there is a target that  $v^*$  can engage into an Agree relation with, the postverbal positioning of the subject does not lead to ungrammaticality. We have already seen examples of this sort where nonsubjects appear as the accusative DP in this type of RTO construction. I repeat these here for convenience:



- (47) a. *ǧanan-tu      Zayd-an      qaabala-hu      ʕaliyy-un*  
           believed.1sg   Zayd-ACC   met.3sgmas.him   Ali-NOM  
           “I believed about Zayd that Ali met him.”
- b. *ǧanan-tu      Zayd-an      maata      axuu-hu*  
           believed.1sg   Zayd-ACC   died.3sgmas   brother.NOM-his  
           “I believed about Zayd that his brother died.”

Further support for this analysis also comes from structures where the complementizer *ʔan*, a weakened version of *ʔinna*, though without any lexical case-assigning ability, introduces the embedded clause of a *ǧanna*-type verb. In this case, the postverbal positioning of the subject is again allowed:

- (48) *ǧanan-tu      ʔan   qad      ʔaDara      Zayd-un*  
           believed.1sg    C    PRTC   came.3sgmas   Zayd-NOM  
           “I believed that Zayd had come.”

The grammaticality of (48) follows under the analysis proposed above, since the introduction of CP now allows Agree to take place with  $v^*$ , thereby licensing its formal features.

In sum, *ǧanna*-type RTO constructions can be derived through a base-generation analysis of the accusative DP at the periphery of the embedded clause. Given the absence of a CP boundary, that peripheral DP is accessible to Agree with  $v^*$ . If correct, this analysis provides further support that agreement/Case-assignment relations can be established at a distance, which is a core assumption of Agree-based syntax.

#### 4.4 RTO constructions of Perception verbs

The third type of RTO constructions in SA that I would like to discuss here occurs in the complements of perception verbs, as in the following examples:

- (49) a. raʔaay-tu ʔal-ʔawlaad-a yaʕab-uun  
saw.1sg the-boys-ACC play-3plmas  
“I saw the boys play.”
- b. samiʕ-tu Zayd-an yuʕanni  
heard.1sg Zayd-ACC sing-3sgmas  
“I heard Zayd sing.”

As with *ʔaraada*-type and *ǧanna*-type verbs, we have the matrix perception verb assigning accusative case to a DP that seems to be thematically related to the embedded verb. As with the previous two RTO constructions, the questions that arise here are: Is the accusative DP in the embedded or matrix clause? If in the matrix clause, where is it located? If in the embedded, then what position does it occupy? How can we explain the presence of accusative case on the DP? I answer these questions below.

Evidence that the accusative DP is in the embedded clause as well as its being base-generated there comes from the same tests used earlier. First, the accusative DP cannot precede a matrix clause adverbial, thus signaling that it cannot be in the matrix clause. So, (50) is only possible on an embedded reading of the adverbial *bil-ʔams-i*:

- (50) raʔaa Zayd-un ʔal-ʔawlaad-a bil-ʔams-i yaʕab-uun  
saw.3sgmas Zayd-NOM the-boys-ACC yesterday play-3plmas  
“Zayd saw the boys play yesterday.”

Second, the accusative DP also shows an intervention effect with wh-movement, thereby indicating a minimality violation, which would be surprising if the accusative DP is an argument of the matrix verb. Compare, for example, the gap-strategy in (51a) with the resumptive pronoun strategy in (51b));

- (51) a. \*man raʔaa Zayd-un ʔal-ʔawlaad-a yaDrib-uuna  
 who saw.3sgmas Zayd-NOM the-boys-ACC hit-3plmas  
 “Who did Zayd see the boys hit?”
- b. man raʔaa Zayd-un ʔal-ʔawlaad-a yaDrib-uuna-hu  
 who saw.3sgmas Zayd-NOM the-boys-ACC hit-3plmas-hu  
 “Who did Zayd see the boys hit?”

Third, overt resumption occurs as expected in P-passives (52a) and when a conjoined subjects occurs postverbally (52b), which is a prototypical property of LD structures:

- (52) a. raʔaay-tu Zayd-an yuqabaD-u ʔaliy-**hi**  
 saw.1sg Zayd-ACC arrest.PASS.3sgmas on-him  
 “I saw Zayd getting arrested.”
- b. raʔaay-tu Zayd-an yalʔab-u **huwwa** wa-axuu-hu  
 saw.1sg Zayd-ACC play-3sgmas he and-brother.NOM-his  
 “I saw Zayd play with his brother.”

Similarly, as with *ǰanna*-type constructions, the accusative DP in a perception verb construction may be associated with nonsubjects, as the following data indicate:

- (53) a. raʔaay-tu Zayd-an tuhadiθ-u-**hu** Hind-u  
 saw.1sg Zayd-ACC speak-3sgfem-him Hind-NOM  
 “I saw Hind talking with Zayd.”

- b.    samiʕ-tu    Zayd-an    yuʕanni    maʕa    axuu-**hu**  
       heard.1sg    Zayd-ACC    sing-3sgmas    with    brother-his  
       “I heard Zayd singing with his brother.”

Given the parallel behavior between perception verb RTO constructions and *ǧanna*-type constructions, I conclude then that the accusative DP in perception verb constructions is also a LD-ed DP base-generated in a peripheral position in the embedded clause, which, in turn, makes it accessible for Case-marking by the matrix verb. It remains now to provide a structural analysis for this type of RTO constructions.

Before we can provide an analysis of the structure of this RTO construction, let us discuss first how this construction resembles or differs from the other two RTO constructions discussed in this chapter.

Notice first that, as in the case of *ʔaraada*-type verbs, the embedded verb following a perception predicate appears in the imperfective, non-tensed form. Tensed verbs cannot be used in the complement of a perception verb, as the ungrammatical sentences in (54) show, thereby indicating that this is a case of non-tensed T:

- (54) a.    \*raʔaay-tu    ʔal-ʔawlaad-a    laʕib-uu  
           saw.1sg    the-boys-ACC    played-3plmas  
           “\*I saw the boys played.”
- b.    samiʕ-tu    Zayd-an    ʕannaa  
       heard.1sg    Zayd-ACC    sang-3sgmas  
       “\*I heard Zayd sang.”

Unlike in *ʔaraada*-type constructions, however, that imperfective verb after perception verbs appears “bare,” i.e., without the subjunctive complementizer *ʔan*. Having a C in this construction is not an option, thereby arguably indicating absence of a CP layer:

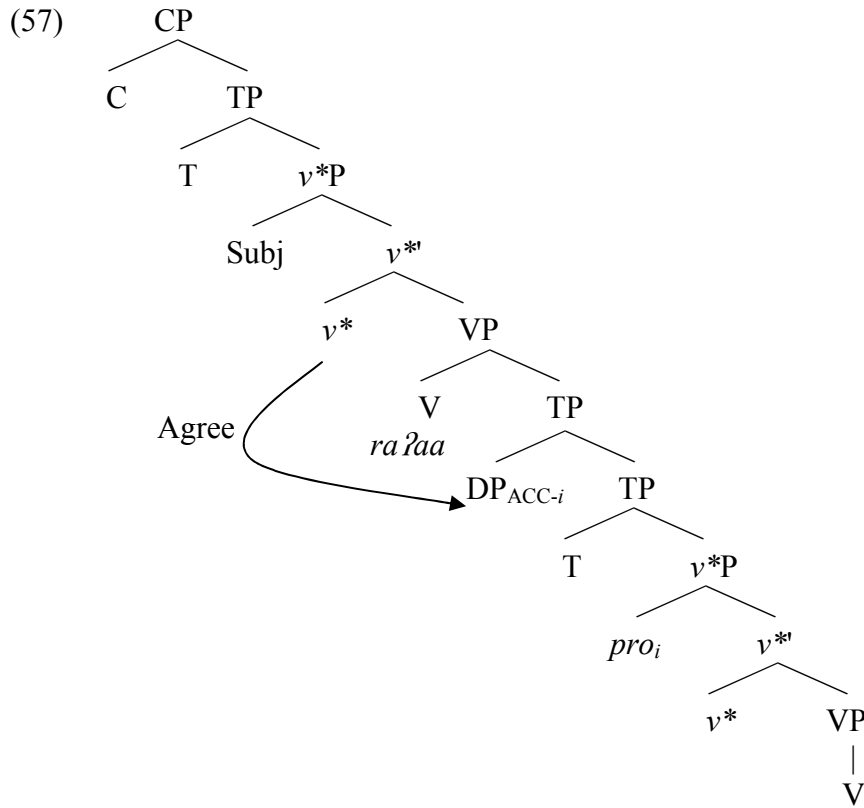
- (55) a. \**raʔaay-tu ʔal-ʔawlaad-a ʔan yalʔab-uu*  
           saw.1sg      the-boys-ACC C      play-3plmas  
           Intended meaning: “I saw the boys play.”
- b. \**samiʔ-tu Zayd-an ʔan yuʔanni*  
           heard.1sg    Zayd-ACC C      sing-3sgmas  
           Intended meaning: “I heard Zayd sing.”

In addition, like the *ǰanna*-type, but unlike the *ʔaraada*-type, the embedded clause of a perception verb can only appear in the SV order. Postverbal positioning of a nominative DP is not allowed:

- (56) a. \**raʔaay-tu yalʔab-u ʔal-ʔawlaad-u*  
           saw.1sg      play-3sgmas the-boys-NOM  
           Intended meaning: “I saw the boys play.”
- b. \**samiʔ-tu yuʔanni Zayd-un*  
           heard.1sg    sing-3sgmas Zayd-NOM  
           Intended meaning: “I heard Zayd sing.”

Taking the lack of an overt C to mean absence of a CP layer, we can extend the analysis of *ǰanna*-type structures to perception verb constructions. More precisely, the accusative case marked DP is base-generated in SpecTP (or the Spec of the

highest FP below C, if available, e.g., Neg) of the embedded clause and linked to a null subject in the thematic domain via A'-binding, as in the following tree:



As with *ǰanna*-constructions, the ungrammaticality of the VS order in the embedded clause of a perception verb, as shown by the examples in (56), now follows from the inability of  $v^*$  to engage into an Agree relation with an accessible target: There is no DP in SpecTP; there is no CP complement of the perception verb; and the postverbal subject DP is inactive after having its case feature licensed by embedded T. Unlike with *ǰanna*-constructions, however, there is no overt C that can occur with a perception verb complement to allow a VS order in these complements. A VS order becomes possible, however, if a nonsubject DP appears in SpecTP, thereby allowing matrix  $v^*$  to license its formal features via Agree:

- (58) a. raʔaay-tu      Zayd-an      tuħaddiθ-u-**hu**      Hind-u  
           saw.1sg      Zayd-ACC      speak-3sgfem-him      Hind-NOM  
           “I saw Hind talking with Zayd.”
- b.    samiʕ-tu      Zayd-an      yuʕanni      maʕa      axii-**hi**  
           heard.1sg      Zayd-ACC      sing-3sgmas      with      brother-his  
           “I heard Zayd singing with his brother.”

In both of these sentences, the presence of a LD-ed DP associated with a nonsubject allows two things to happen:  $v^*$  to Agree with the LD-ed DP, assigning accusative case to it; and non-tensed but  $\phi$ -active T to Agree with the postverbal subject assigning nominative case to it.<sup>9</sup>

Notice that the parallelism between perception verbs and *ǧanna*-type verbs is not total. Remember that a TP selected by a *ǧanna*-type verb is tensed, whereas a TP selected by a perception verb is non-tensed. As we should expect, while the complement clause of a *ǧanna*-type verb is tense-independent, the T of the embedded clause of a perception verb is dependent on matrix T. Different time adverbials can thus modify the two clauses in the former type (59a), but not in the latter (59b):

- (59) a. bil-ʔams-i    ǧanan-tu    ʔal-ʔawlaad-a    sa-ya-raħal-uun    ʕadan  
           yesterday    believed.1sg    the-boys-ACC    FUT-leave-3plmas    tomorrow  
           “Yesterday I believed the boys to be leaving tomorrow.”

<sup>9</sup> The subject of the embedded clause in (58b) is *pro*. I have not made any assumptions regarding what case *pro* gets. Since it occurs in positions where lexical DPs also occur, it is reasonable to assume it gets nominative case, but this is by no means necessary. If Uriagereka’s (2006) approach to null case is correct, then *pro* is probably one of those elements that receive null case. I will not pursue this issue here further, merely noting, however, that the Visibility Hypothesis does force us to assume that *pro* does get case.

- b. \*bil-ʔams-i raʔaay-tu ʔal-ʔawlaad-a ya-raħal-uun ʔadan  
 yesterday saw.1sg the-boys-ACC leave-3plmas tomorrow  
 “\*Yesterday I saw the boys leave tomorrow.”

In this section, I hope to have shown that another type of RTO construction in SA has to be derived via base-generation of the accusative DP at the periphery of the embedded clause, hence allowing it to become accessible to the matrix verb for the purposes of Agree and Case-assignment. If correct, the analysis provides another case of long distance agreement that can be readily accommodated in an Agree-based syntax.

#### 4.5 Chapter Summary

In this chapter I have shown that RTO constructions in SA are the result of base-generation rather than a raising operation. While all the structures are assumed not to involve movement, they differ with regard to where the accusative DP is base-generated and the type of category that functions as a complement for each. In *ʔaraada*-type RTO constructions, the accusative DP is argued to occupy a thematic position in the matrix clause, where it is assigned a  $\theta$ -role by the matrix verb and accusative case by the functional head  $v^*$ . This rich structure gives rise to interpretive effects, comparable to those found in sentences that have a PP carrying the same  $\theta$ -role. The accusative DP, meanwhile, is linked to a resumptive pronoun, null in the case of the subjects, overt in the case of nonsubjects.

*ǰanna*-type RTO constructions are, however, argued to base-generate the accusative DP at the left periphery of the embedded clause. Taking the absence of an overt C to indicate the absence of the CP boundary, the peripheral accusative DP can



now be accessible for Agree with matrix  $v^*$ , under standard assumptions of phase-based syntax. I have also shown that the impossibility of postverbal positioning of the DP follows from the inability of  $v^*$  to engage into any Agree relation to license its formal features, hence causing the derivation to crash. When an overt C or a nonsubject DP occupies the peripheral position of the embedded clause, occurrence of a postverbal subject becomes possible.

Finally, RTO constructions with perception verbs are argued to have the same embedded clause structure of *ǰanna*-type constructions, except that they are headed by a non-tensed T, hence their tense-dependence on matrix T. Despite non-tensedness, embedded T is still  $\phi$ -active and is able to Agree and assign nominative case to a postverbal subject, if another DP occupies a peripheral position in the embedded clause for matrix  $v^*$  to Agree with.

All in all, the RTO constructions discussed here show that SA is a language that does not seem to use A-movement operations. Rather, displaced DPs are base-generated in their surface position, while being linked to pronominals in the thematic domain, typically via A'-binding. This should not come as a surprise in a language that does not have passive, subject-to-subject raising, nor subject movement from Spec $v^*P$  to SpecTP, as has been argued for in this thesis.

## Chapter 5

### Formal feature licensing in the functional domain: Inflecting negatives and person-less imperatives in SA

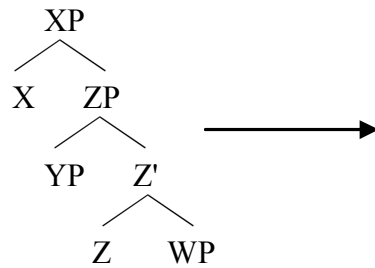
In the previous three chapters, the discussion has focused on formal feature licensing operations that hold between functional heads and substantive categories, whereby the uninterpretable features on both (agreement and case, respectively) get licensed. I have shown that an approach to formal feature licensing of the Agree-based variety is empirically needed to account for the set of agreement and case phenomena discussed. In this chapter, I shift the focus to formal feature licensing in relations holding between heads, those that have been typically accounted for via head movement in GB theory and also minimalism. More specifically, however, I discuss a set of morphosyntactic phenomena involving the interactions between heads in the functional domain. I propose that an extension of the Agree relation to such relations is warranted. This has both conceptual and empirical appeal. Theoretically, head movement has always been a problem to the minimalist program; if, however, the relations involved in such operations can be reduced to Agree, then these theoretical problems disappear. Empirically, I will show that a set of morphosyntactic properties can be accounted for, if features of one functional head are allowed to appear on another, again via Agree. If correct, then we have further support for Agree-based syntax, since head movement (or at least the one involved in relations between functional heads) can now follow from the operation needed for formal feature licensing in the grammar.

## 5.1 Why is head movement minimalistically problematic?

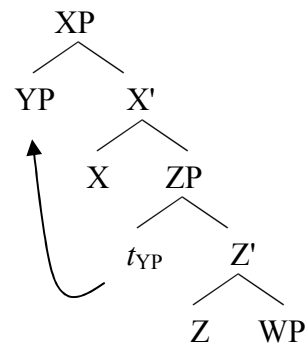
Since the inception of the GB framework, different movement operations were considered as instances of a single operation of *Move*  $\alpha$ . But instantiations of this operation have been often noted to exhibit different behavior. In this respect, XP-movement and  $X^0$ -movement (the latter typically called head movement) have characteristically behaved differently with regard to the general properties and constraints on movement operations. Consider the abstract illustrations of how XP-movement and  $X^0$ -movement change structures, as shown in (1) and (2), respectively (HM = head movement):

(1) a. A pre-phrasal-Movement

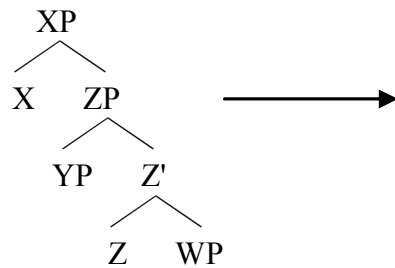
structure :



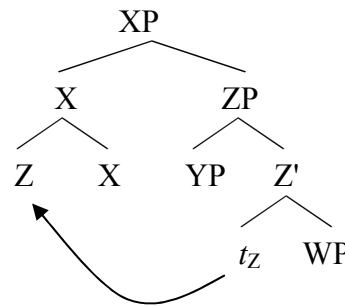
b. A post-phrasal-Movement structure:



(2) a. A pre-HM structure:



b. A post-HM structure:



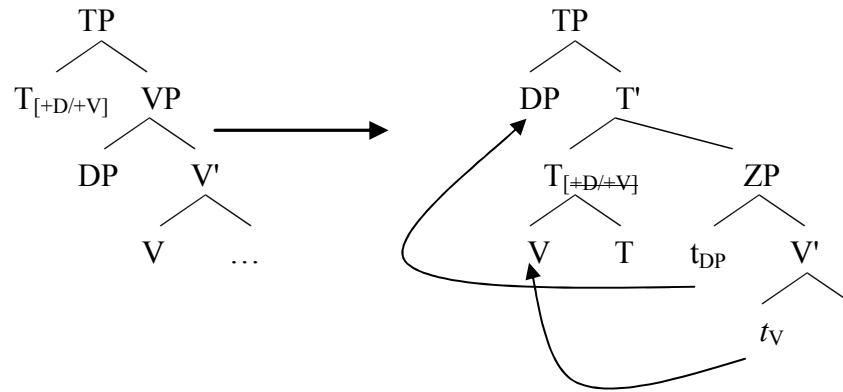
Within the minimalist program, however, the derived structure in (2b) has always been problematic, for several reasons.

First, HM violates the *Extension Condition* (EC) in the sense of Chomsky (1995), which states that movement operations have to target the root of the tree. In (2b), since the moved head is not Merged at the root of the tree, it represents a violation of the EC. Since HM is an adjunction operation, its non-cyclic nature is expected. I have assumed earlier in this thesis (cf. the discussion of first conjunct agreement in Chapter 2) that non-cyclic Merge of adjuncts is possible. If this is an inherent property of adjunction, then the violation of the EC by HM is expected.

Second, HM creates a *non-uniform* chain in the sense of bare phrase structure theory (Chomsky 1995, Chap.4/ cf. also the brief discussion of bare phrase structure in Chapter 1 of this thesis): The trace of Z in (2b) is a minimal category, but Z itself is both minimal and maximal, therefore violating chain uniformity. While this is true, the seriousness of the problem depends on whether the uniformity condition indeed holds. After all, as Norbert Hornstein (p.c.) points out, it is not clear what it follows from in minimalist syntax.

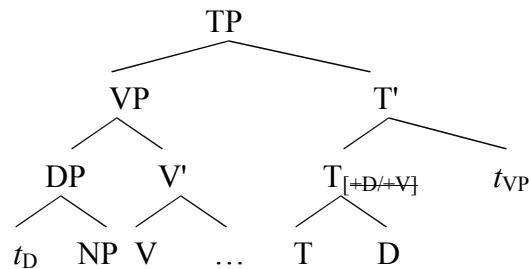
Perhaps a more serious problem with HM is that the operation just does not seem to be minimally driven by formal feature licensing. Using categorial features (e.g., [+V], [+N]), as proposed in Chomsky (1993, 1995), turns out to create a “traffic rule” problem, as noted in Chomsky (2001a). For example, in the pre-movement structure in (3a) below, if T has both a [+D] and [+V] feature, the standard way of licensing these features is for a DP to move to SpecTP to license the [+D] feature, and for a verb to move to T to license the [+V] feature, as shown in the post-movement structure (3b):

- (3) a. The pre-movement structure:      b. The post-movement structure:



As it turns out, however, there is another viable way for checking categorial features of T in (3a): Move a VP to SpecTP to check the [+V] feature, and move a D head to T to check the [+D] feature, thereby generating the unwanted post-movement structure in (4) below:

- (4) The post-movement structure:



While movement of a VP to SpecTP (as in VOS languages for example) and of D to T (as in cliticization in Romance and similar languages) have been suggested in the literature, the co-occurrence of both operations as in (4) is not empirically attested.<sup>1</sup> What we need then is a way to regulate feature licensing in structures such as (3a), such that only (3b), but not (4), emerges as the post-movement structure.

<sup>1</sup> The relevant language would be one in which tense is realized on the D head of the subject DP, with the verb appearing in non-tensed form. As far as I know, no such language exists.

Finally, it has been pointed out that while XP-movement is typically assumed to potentially have semantic effects (e.g., raising in “*The boys<sub>i</sub> seem to each other [t<sub>i</sub> to like Mary]*”), HM, by contrast, does not seem to be associated with similar effects, e.g., verb raising in French and its lack thereof in English do not seem to correlate with any semantic differences that the two languages have, which again seems to suggest that perhaps the two operations are not of the same type (cf. Chomsky 2001a).

To solve the problems associated with HM, one suggestion has been to eliminate HM from the syntax and treat it instead as an operation of the morphophonological component, perhaps driven by the affixal properties of the relevant functional heads (Chomsky 2001a; Boeckx and Stjepanović 2001). While this might escape the theoretical problems mentioned above, it still requires empirical validation. In essence, we need to make sure that all the phenomena that have been subsumed under syntactic HM before still follow under the morphophonological HM approach.

In this chapter, I revisit the properties of the Standard Arabic negation paradigm, a classical HM phenomenon, to verify how straightforwardly they follow under the morphophonological approach, and if not, whether we can account for them in the syntax, though crucially without having to face the above mentioned problems associated with HM in general.

## 5.2 The facts: Negation paradigms in SA

There are three strategies for clausal negation in SA: negation with tense-inflecting *laa*, negation with  $\phi$ -inflecting *laysa*, and negation with non-inflecting *maa*. I discuss each below, with examples and associated morphosyntactic properties.

### 5.2.1 Tense on Neg and $\phi$ on V: The case of *laa* and its variants

The negation particle *laa* in SA is tense-inflecting. Depending on the tense of the sentence, it will surface as *lam* (for negation in the past), *lan* (for negation in the future), or *laa*, the elsewhere form. This is illustrated in the data below:

- (5) a.    *laa*                    *ya-qraʔ-u*                    *Zayd-un*            *ʔal-kitaab-a*  
          Neg<sub>PRESENT</sub>    IMPER-read 3sgmas-IND    *Zayd-NOM*    the-book-ACC  
          “Zayd is not reading the book.”
- b.    *lam*                    *ya-qraʔ-Ø*                    *Zayd-un*            *ʔal-kitaab-a*  
          Neg<sub>PAST</sub>        IMPER-read 3sgmas-JUS    *Zayd-NOM*    the-book-ACC  
          “Zayd did not read the book.”
- c.    *lan*                    *ya-qraʔ-a*                    *Zayd-un*            *ʔal-kitaab-a*  
          Neg<sub>FUTURE</sub>    IMPER-read 3sgmas-SUB    *Zayd-NOM*    the-book-ACC  
          “Zayd will not read the book.”

Notice here that the verb always appears in the non-tensed imperfective form, inflecting for what is traditionally called “mood-marking”, though a better term is Fassi Fehri’s “temporal Case”, which I will use here, to avoid confusion with mood/modality notions, which are obviously not involved here, since all these sentences in (5) have the same illocutionary force (i.e., all are negative declarative sentences, that only differ in tensehood properties). Notice from the data in (5) that

there are three temporal cases: the subjunctive, the jussive, and the (default) indicative markers.

As we should expect, occurrence of a tensed verb with tensed Neg is disallowed:

- (6) a. \*lam qraʔa Zayd-un ʔal-kitaab-a  
 Neg read 3sgmas (Past) Zayd-NOM the-book-ACC  
 “Zayd did not read the book.”
- b. \*lan sa-ya-qraʔ-a Zayd-un ʔal-kitaab-a  
 Neg FUT-IMPER-read 3sgmas-SUB Zayd-NOM the-book-ACC  
 “Zayd will not read the book.”

Notice further that there is an adjacency requirement between the negation particle and the verb, such that no intervening material (e.g., the subject) can occur between the two:

- (7) a. \*laa Zayd-un yu-ḥibb-u ʔal-qiraaʔat-a  
 Neg Zayd-NOM IMPER-love 3sgmas-IND the-reading-ACC
- b. \*lam Zayd-un ya-qraʔ-Ø ʔal-kitaab-a  
 Neg Zayd-NOM IMPER-read 3sgmas-JUS the-book-ACC
- c. \*lan Zayd-un ya-qraʔ-a ʔal-kitaab-a  
 Neg Zayd-NOM IMPER-read 3sgmas-SUB the-book-ACC



### 5.2.2 $\phi$ -agreeing Neg without adjacency: The case of *laysa*

In the so-called present tense contexts, an alternative way of negating the clause is by means of the negation particle *laysa*,<sup>2</sup> which inflects for agreement with the subject, as in (8):<sup>3</sup>

- (8) a.    *laysa*            *Zayd-un*        *yu-ḥibb-u*                    *ʔal-qiraaʔat-a*  
           Neg 3sgmas    *Zayd-NOM*    IMPER-like 3sgmas-IND    the-reading-ACC  
           “Zayd does not like reading.”
- b.    *laysa-t*            *Hind-u*            *tu-ḥibb-u*                    *ʔal-qiraaʔat-a*  
           Neg 3sgfem    *Zayd-NOM*    IMPER-like 3sgfem-IND    the-reading-ACC  
           “Hind does not like reading.”
- c.    *las-naa*        *nu-ḥibb-u*                    *ʔal-qiraaʔat-a*  
           Neg 1pl    IMPER-like 1pl-IND    the-reading-ACC  
           “We do not like reading.”

Notice here that *laysa*, unlike *laa*, does not require adjacency with the verb, as shown by the possibility of having the subject between *laysa* and the main verb. Notice also that *laysa* cannot occur in non-present-tense contexts, as the ungrammaticality of (9) indicates:

- (9) a.    \**las-tu*        *qaraʔ-tu*        *ʔal-kitaab-a*  
           Neg 1sg    read 1sg        the-book-ACC  
           “I didn’t read the book.”
- b.    \**las-tu*        *sa-ʔa-qraʔ-u*                    *ʔal-kitaab-a*  
           Neg 1sg    FUT-IMPER-read 3sgmas-IND    the-book-ACC  
           “I won’t read the book.”

<sup>2</sup> Semantically, there seems to be more emphasis associated with verbal negation with *laysa*, compared to *laa*.

<sup>3</sup> The negation particle *laysa* is typically treated as a verb in Arabic traditional grammar, because it behaves like verbs do with regard to agreement. Note also that it shows the same subject-verb agreement asymmetry associated with the VS-SV word order alternation.

A third negation particle in SA is *maa*, which does not inflect for tense or agreement. *maa* is compatible with all verb forms (10a-c), and does not impose adjacency requirements on the following verb (11a-b):

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#### 5.2.4 Descriptive generalizations

Clausal negation in SA can be summarized in the following descriptive generalizations:

- (12) a. *laa* inflects for Tense and forms a morphological compound with the verb, which appears in the non-tensed imperfective form.
- b. *laysa* inflects for  $\phi$ -agreement, occurs only in present tense contexts, and does not form a morphological compound with the verb.
- c. *maa* does not inflect for tense nor  $\phi$ -agreement, is compatible with all tense forms, and does not form a morphological compound with the verb.

#### 5.3 A HM analysis of SA negation

The standard analysis of tense-inflecting negation in SA is in terms of head-to-head movement between T and Neg (Ouhalla 1991, 1993; Shlonsky 1997; Benmamoun 2000). Since T and Neg merge, the tense feature of the clause will appear on Neg, rather than on the verb, thereby accounting for why the verb has to appear in its non-tensed imperfective form. For illustration, I present and discuss Benmamoun's (2000) analysis of the tensed negatives here.

Benmamoun makes three crucial assumptions in his discussion of negation in SA:

- (13) a. First, T is higher than Neg in the clausal hierarchy in SA.
- b. Second,  $T_{[Past]}$  and  $T_{[FUTURE]}$  have a  $[+V]$  feature that requires checking by verb raising to T, whereas  $T_{[Present]}$  does not have such feature, hence no V-to-T raising is needed.
- c. Third, Neg has a  $[+N]$  feature that requires checking by a nominal.

(14)

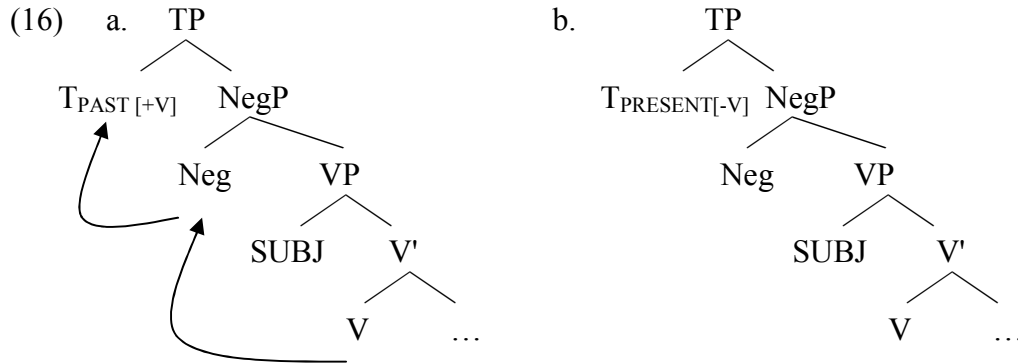
```
graph TD
    TP --> T["T_{[+D/+V]}"]
    TP --> NegP
    NegP --> Neg["Neg_{[+D]}"]
    NegP --> VP
    VP --> SUBJ
    VP --> Vp1["V'"]
    SUBJ --> NP["The boy"]
    Vp1 --> V1["is"]
    Vp1 --> Vp2["V'"]
    Vp2 --> V2["not"]
    Vp2 --> Vp3["V'"]
    Vp3 --> V3["happy"]
    Vp3 --> Ellipsis["..."]
```



(15) a. xalid      ma-ʔaraa-š      əl-kitaab  
Khalid   Neg-read (Past).3sgmas-Neg   the-book  
‘Khalid did not read the book.’

- b. xalid    miš    bi-yə-ʔraa                      l-kitaab  
 Khalid   Neg   ASP-IMPER-read.3sgmas   the-book  
 “Khalid is not reading the book.”

Benmamoun’s account for the contrast in (15) is based on the main background assumption in (13b) regarding the difference in verb-raising in structures with present T and those with non-present T. Now, given that Neg is lower than T under Benmamoun’s analysis, the verb is predicted to merge with Neg on its way to T in past tense contexts, as shown in (16a), but not so in present tense contexts, since, by assumption, there is no verb raising in the latter, as shown in (16b):



As it turns out, there is a range of data from these Arabic dialects that show that this analysis cannot account for all the facts. First, in EA, present tense forms can actually occur with the circumfixal Neg, such that (15b) is interchangeable with (17) below:

- (17) xalid    ma-bi-yə-ʔraa-š                      ʔal-kitaab  
 Khalid   Neg-ASP-IMPER-read.3sgmas-Neg   the-book  
 “Khalid is not reading the book.”

If Benmamoun is correct about Neg being lower than T and about present tense T being [-V], then the grammaticality of sentences such as (17) remains a mystery.

Also, in EA, the independent Neg morpheme *miš* has to precede the future verb form, contrary to what Benmamoun's analysis predicts:

- (18)    xalid    miš    (f-əl-ʔaalib)    ʔa-yə-ʔra    l-kitaab  
           Khalid   Neg   (probably)    FUT-IMPER-read 3sgmas   the-book  
           "Khalid won't probably read the book."

In fact, what (18) shows is that Neg must be higher than T in clause structure.

Similarly, in at least one dialect of EA, *miš* can actually occur with past tense verb forms:

- (19)    xalid    miš    ʔara    l-kitaab    Sharqeyya Egyptian Arabic  
           Khalid   Neg   read (Past) 3sgmas   the-book  
           "Khalid did not read the book."

If T in past tense contexts has a [+V] feature, it is not clear then why in this dialect non-affixal Neg appears.

Furthermore, even in those EA dialects where sentences like (19) are ungrammatical, the independent Neg morpheme can still occur with past tense verb forms in yes-no questions:

- (20)    miš    xalid    ʔara    l-kitaab?    Egyptian Arabic  
           Neg   Khalid   read (Past) 3sgmas   the-book  
           "Didn't Khalid read the book?"

If Neg is lower than T, the structures in (18), (19), and (20) are simply underivable.

I conclude then that Neg is higher than T in Arabic clause structure, and that the dialectal variation observed in the modern dialects may follow from whether V moves to T only, thereby giving us the non-affixal morpheme, or to T then Neg, thereby giving us the circumfixal morpheme. Notice, however, that if Neg is higher

than T, then we need to explain the ungrammaticality of the SA examples in (21) below, where tense is realized on V, rather than on Neg (cf. 6):

- (21) a. \*laa qraʔa Zayd-un ʔal-kitaab-a  
 Neg read (Past) 3sgmas Zayd-NOM the-book-ACC  
 “Zayd did not read the book.”
- b. \*lam qraʔa Zayd-un ʔal-kitaab-a  
 Neg read 3sgmas (Past) Zayd-NOM the-book-ACC  
 “Zayd did not read the book.”
- c. \*lan sa-ya-qraʔ-a Zayd-un ʔal-kitaab-a  
 Neg FUT-IMPER-read 3sgmas-SUB Zayd-NOM the-book-ACC  
 “Zayd will not read the book.”

#### 5.4 Deriving tensed negatives in the morphophonology

In the absence of an actual analysis of the negation paradigm in terms of morphophonological HM, one can only speculate on how such an analysis would work. Assume, for example, that the sentence we are interested in is the SA example in (5b), repeated below, where past tense is realized on Neg, while the verb appears non-tensed, but with  $\phi$ -features.

- (22) lam ya-qraʔ-Ø Zayd-un ʔal-kitaab-a  
 Neg<sub>PAST</sub> IMPER-read 3sgmas-JUS Zayd-NOM the-book-ACC  
 “Zayd did not read the book.”

We may assume that the syntax has built the structural representation in (23) below, ignoring irrelevant details:

- (23) [<sub>NegP</sub> Neg [<sub>TP</sub> T<sub>[+Past]</sub> $\phi$  [<sub>VP</sub> ... V ...]]]

Now, the question is: How does HM take place in this instance, so we derive the surface structure in (22)? One possible account is as in (24):

- (24) a. PF-Move T to Neg:  $[_{NegP} [_{Neg+T}_{[+Past]\phi}] [_{TP} [_{VP} \dots V \dots]]]$   
 b. PF-Move V to the  $[Neg+T]$  complex:  $[_{NegP} [[Neg+T]_{[+Past]\phi}] + V] [_{TP} [_{VP} \dots]]]$   
 c. Spell-out  $[+Past]$  on Neg and  $\phi$  on V, forming  $[Neg_{[+Past]}] + V_{\phi}$ .

A few questions arise, however, with regard to (24). First, we do need to make sure that T moves to Neg prior to V moving to the whole complex; otherwise, we would generate the bad sentences in (21). Also, even with the correct output of morphophonological HM, we do need to explain why V realizes the  $\phi$ -features on T, but not the tense feature. Alternatively, why can't Neg realize both the  $\phi$ -features and tense associated with T? In addition, despite the similarity between tensed Neg and  $\phi$ -agreeing Neg, we are forced to treat them differently: the former in the morphophonology, the latter in the syntax, thereby missing a traditionally noted generalization. Finally, in embedded clauses of the so-called subjunctive type, tensed negatives are not possible, as the data in (25) below show:

- (25) a.  $\text{ʔarad-a}$              $\text{Zayd-un}$              $\text{ʔalla (=ʔan+laa)}$      $\text{ya-rʔal-a}$   
           wanted 3sgmas    Zayd-NOM    C+Neg<sub>present</sub>            IMPER-leave 3sgmas-SUB  
            $\text{ʔamr-u}$   
           Amr-NOM  
           ‘‘Zayd wanted Amr not to leave.’’
- b. \* $\text{ʔarad-a}$              $\text{Zayd-un}$              $\text{ʔallam (=ʔan+lam)}$      $\text{ya-rʔal-a}$   
           wanted 3sgmas    Zayd-NOM    C+Neg<sub>Past</sub>                IMPER-leave 3sgmas-SUB  
            $\text{ʔamr-u}$   
           Amr-NOM



- c. \*ʔarad-a            Zayd-un            ʔallan (=ʔan+lan)    ya-rhal-a  
                          wanted 3sgmas    Zayd-NOM    C+Neg<sub>Future</sub>            IMPER-leave 3sgmas-SUB  
                          ʔamr-u  
                          Amr-NOM

The question now is: How can we account for the facts in (25) in morpho-phonological terms?

To summarize, while an analysis in terms of syntactic HM can account for sentences with tensed negatives in SA, further assumptions are needed to prevent it from overgenerating [Neg<sub>[non-tensed]]+V<sub>[tensed]] strings. A morphophonological HM account, by contrast, forces us to treat tensed Neg and  $\phi$ -agreeing Neg differently, even though they both seem to exhibit a similar pattern. Also, neither analysis explains the presence of temporal case features on the verb in these contexts. In the next section, I would like to argue that a “hybrid” analysis of the negation paradigm is able to account for the facts without running into the theoretical and/or empirical problems that each of these two analyses runs into.</sub></sub>

## 5.5 A “Hybrid” Analysis: Agree in the syntax, HM in the morphophonology

One thing we observe about inflecting negatives in SA is that the phenomenon has the flavor of formal features licensing in the minimalist sense. For one thing, there is no reason to believe that  $\phi$ -features on Neg are different from  $\phi$ -features on T, or any other functional head for that matter. Similarly, a tense feature on Neg is presumably a formal feature as well. If this is the case, then we should wonder if we can treat the phenomenon in terms of the mechanisms of formal feature licensing utilized in minimalist syntax. A Spec-head approach to these phenomena is obviously not viable.

On the other hand, we have already seen that feature licensing through HM gives rise to a number of theoretical problems that have remained unsolved (cf. Section 1 of this chapter). The question now is: How does Agree-based syntax fare in this respect? If Agree is a head-head relation, as Chomsky (2001a,b) argues, then it should not be constrained to apply only between functional heads and substantive categories. Rather, any two elements in the structure should be able to engage in a Probe-Goal relation if the conditions for such a relation are met, i.e., that they both have uninterpretable features that require valuation. I would like to argue here that Neg in SA can in fact engage in an Agree relation with T in certain contexts, thereby giving rise to tensed negatives.  $\phi$ -agreeing negatives, on the other hand, follow from Neg having  $\phi$ -features that require valuation in an Agree relation with a DP. Non-agreeing Neg is simply an inactive head that does not engage in any syntactic operations. I discuss each case below.

### 5.5.1 Deriving tensed negatives in SA: The case of *laa*

Given the facts of the negation paradigm presented in Section 2, I will make the plausible assumption that Neg in SA may enter the derivation with an uninterpretable Tense feature [uT] or uninterpretable  $\phi$ -features [u $\phi$ ], each of which requires licensing in the syntax under standard minimalist assumptions. Let's see how this analysis works.

Consider the case of tensed Neg first, as in the following example:

- (26)      lam                      ya-qra?-Ø                      Zayd-un                      ?al-kitaab-a  
              Neg<sub>PAST</sub>                IMPER-read 3sgmas-JUS      Zayd-NOM      the-book-ACC  
              "Zayd did not read the book."



Obviously, what we need to do here is capture the standard distinction between  $X^0$ -XP relations and  $X^0$ - $X^0$  relations. Remember that Agree between a head H and a substantive category XP results in feature valuation on H, where valuation is a process of feature copying e.g., Agree between T and a DP results in copying the  $\phi$ -features of the DP onto T. Suppose, then, in order to capture the distinction between  $X^0$ -XP relations and  $X^0$ - $X^0$  relations, needed in any theory anyway, that in induced-by-Agree  $X^0$ - $X^0$  relations an interface condition forces the copied feature to be pronounced on Probe P, but interpreted on Goal G, when G is the head of the sister of P. This will ensure that the valued feature on the Probe gets deleted, thereby allowing the derivation to converge at LF, but at the same time the (now silent) feature on the Goal remains available, so it gets interpreted at LF. Such a condition is, in essence, Hale and Keyser's (2002) *Strict Complementation Condition* on conflation processes, and also the *Head Movement Generalization* of Pesetsky and Torrego (2001). For convenience, I will just call it Condition R.<sup>5</sup>

To give a concrete example, let's revisit the problem with the structural representation in (28), repeated below:

(30) [NegP Neg<sub>[+Past]</sub> [TP T<sub>[+Past]/ $\phi$ /[uTC]</sub> [VP Subj V<sub>ROOT</sub>...]]]

---

<sup>5</sup> If Agree is indeed involved in these cases as proposed here, then we have to assume that the difference between prototypical Agree configurations (i.e., those between a head and a substantive category) and the head-head configurations discussed in this chapter, is probably locality, or anti-locality for that matter. Agreeing with the head of your sister is pretty much like Agreeing with your sister, and perhaps there is an anti-locality effect prohibiting the same feature from appearing multiply within too local a domain, as Grohmann (2000, 2003) suggested. Now, when the sisterhood relation is not involved, then both elements in the Agree relation can, or perhaps must, spell-out the relevant features independently, e.g., T spells out the  $\phi$ -features that are also spelled out on the agreeing DP. I believe that this is the intuition behind Hale and Keyser's (2002) analysis for conflation. One may also speculate that incorporation in the sense of Baker (1988) is of that nature. As far as I know, we do not see incorporation of an object coupled with spell-out of that object separately inside the same VP (e.g., no instances of "John meat-ate the meat"). It remains, however, to find out what relevant feature is involved in incorporation, if we want to extend the Agree-based analysis proposed here to such cases. I will get back to the issue of anti-locality in the concluding chapter with a brief discussion.

Now bearing Condition R in mind, the problem with (30) disappears, since [+Past], while appearing on both Neg and T, will be pronounced only on the former, but interpreted on the latter, in compliance with Condition R, since the Goal, T, is the head of the sister of the Probe, Neg. This way we predict the ungrammaticality of sentences where both tensed Neg and tensed V co-occur. While Condition R might seem *ad hoc*, I will provide further evidence later in the chapter that it does indeed exist.<sup>6</sup>

We have now managed not only to predict that tense will appear on Neg, but also to prevent multiple tense-marking in negative sentences in SA. The rest of the derivation could be handled in the morphophonological component. For example, verb movement to T and Neg is probably driven by the affixal features of both heads, which results in the observed adjacency requirement.<sup>7</sup> Notice also that V will end up hosting the  $\phi$ -features on T, while appearing in the non-tensed imperfective form (or Condition R would be violated). Finally, as a result of Agree, the temporal case features on V are valued, which explains the presence of these formal features on verbs in such contexts.

In sum, the hybrid analysis proposed here accounts for the properties associated with tensed negatives in SA. First, tense appears on the negation particle as a reflex of the valuation of an uninterpretable feature on Neg. Second, the verb has to appear in the imperfective non-tensed form since Neg realizes the tense feature. Third, adjacency is accounted for in terms of morphophonological head movement

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<sup>6</sup> See also fn. 5 above for what Condition R might follow from.

<sup>7</sup> There is evidence that Neg by itself is not an affix in the language, as we will see later in the discussion of the negation particle *maa*. We may assume here that it is the tense feature on Neg that actually renders it affixal, hence requiring it to be part of the verbal complex.

that requires V to raise to T and Neg, to license their affixal features. Finally, the Agree relation leads to the valuation of the temporal case on T, resulting on what has been traditionally called mood-marking on the verb.

### 5.5.2 Deriving $\phi$ -agreeing negatives in SA: The case of *laysa*

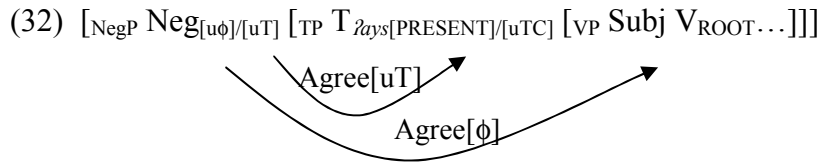
Recall that *laysa*, unlike *laa*, shows  $\phi$ -agreement, is only compatible with present tense contexts, and does not require adjacency with the verb. The examples are repeated below:

- (31) a. *laysa*            *Zayd-un*        *yu-hibb-u*                    *?al-qiraa?at-a*  
           Neg 3sgmas    Zayd-NOM    IMPER-like 3sgmas-IND    the-reading-ACC  
           “Zayd does not like reading.”
- b. *laysa-t*            *Hind-u*            *tu-hibb-u*                    *?al-qiraa?at-a*  
           Neg 3sgfem    Zayd-NOM    IMPER-like 3sgfem-IND    the-reading-ACC  
           “Hind does not like reading.”
- c. *las-naa*    *nu-hibb-u*                    *?al-qiraa?at-a*  
           Neg 1pl    IMPER-like 1pl-IND    the-reading-ACC  
           “We do not like reading.”

Given the presence of  $\phi$ -features on *laysa*, we have to assume that Neg in such contexts enters the derivation with uninterpretable  $\phi$ -features that require valuation. I will assume that Neg in this case Agrees with a DP target in the same way that T does. For example, in (31a), it agrees with the subject *Zayd-un*, in (31b) with the subject *Hind-u*, and in (31c) with a null subject *pro*.

It has been noted in the literature on SA negation that *laysa* is actually a composite form, consisting of the negation particle *laa* and the extinct present tense

copula *lays* (Wright 1898:96; Ouhalla 1993). If this is the case, then this is probably why *laysa* is only compatible with present tense contexts. Given these assumptions, the structural representation when Neg is introduced into the derivation is as in (32), again ignoring irrelevant details:<sup>8</sup>



Agree takes place between Neg and Subj in the usual fashion, valuing the former's  $\phi$ -features. Agree also takes place between Neg and T, valuing the former's tense feature, and licensing T's temporal case in the process. By Condition R, tense can only be pronounced on Neg, as desired. In the morphophonological component, the copula morpheme *lays* moves to host affixal Neg, forming the composite negation particle *laysa*.

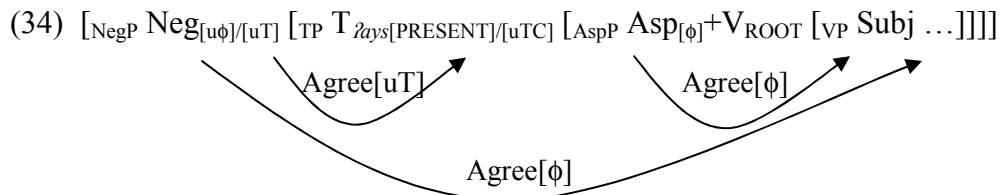
Notice, however, that if present tense T has no  $\phi$ -features (cf. fn. 8), then we have no explanation for why the main verb appears with  $\phi$ -features as well, as the data in (33) show. An answer is readily available when we consider multiple agreement configurations in aspectual structures in SA (33a) and EA (33b):

- (33) a. kaana-t      Hind-u      ta-lʕab-u      fii ʔal-ħadiiqat-i  
          was 3sgfem   Hind-NOM   IMPER-play 3sgfem-IND   in   the-garden-GEN  
          “Zayd was playing in the garden.”

<sup>8</sup> I will assume here that present tense T, unlike past T, is “ $\phi$ -feature inert”, i.e., it has no  $\phi$ -features, hence presumably nonaffixal. I suspect that this is precisely the reason why verbless sentences in this language occur only in present tense contexts, the reason being that there are no features on T that require a verbal host. Past and future T are, by contrast,  $\phi$ -active and hence affixal, thus always requiring a verbal host. This assumption will prove useful later in the discussion in this section.

- b.    ?əl-wilaad    kann-u            bi-yə-lʔab-u                            fi 1-geneyna  
       the-boys       was 3plmas    Asp-IMPER-play 3plmas    in    the-garden-GEN  
       “The boys were playing in the garden.”

To account for multiple agreement, I suggested in a footnote in Chapter 2, that such structures actually contain an Asp(ectual) projection, which is also  $\phi$ -active, thereby explaining presence of multiple agreement on both the auxiliary and the main verb.<sup>9</sup> Now, given that *laysa*-constructions are confined to aspectual contexts, particularly habitual or progressive aspect, it follows that they also must have a  $\phi$ -active Asp, which hosts the verb in sentences such as those in (31). A full structural representation of a *laysa*-negative with Agree relations and verb movement will be along the lines in (34):



Notice, finally, that the Asp projection has to be present also in the cases of tensed negatives with *laa* in present tense contexts where an aspectual reading is also available, as in (35) below:

- (35)    laa        yu-ħibb-u                            Zayd-un        ?al-qiraaʔat-a  
       Neg       IMPER-love 3sgmas-IND       Zayd-NOM       the-reading-ACC  
       “Zayd does not like reading.”

Unlike the case with *laysa*, however, there is no lexical head to support affixal Neg, and therefore the [Asp+V] complex has to raise to host Neg, merging on the way with T, which explains the adjacency requirement in this case of negation. That this is

<sup>9</sup> Notice that aspectual head is expressed overtly in EA: the *bi-* morpheme in (33b).



correct is supported directly by the fact that in case an auxiliary *kwn* (=BE) is available, morphological merger with the [Asp+V] complex is not now needed, since the auxiliary is a closer host of the Neg affix, and adjacency is no longer required:

- (36) a. lam        ya-kun-Ø                      Zayd-un        ya-lʕab-u  
              Neg<sub>PAST</sub> IMPER-BE 3sgmas-JUS    Zayd-NOM IMPER-read 3sgmas-IND  
              “Zayd was not playing.”
- b. lan        ya-kuun-a                      Zayd-un        ya-lʕab-u  
              Neg<sub>FUTURE</sub> IMPER-BE 3sgmas-SUB    Zayd-NOM IMPER-read 3sgmas-IND  
              “Zayd will not be playing.”

In short, the properties of the *laysa*-type negation in SA can be accounted for in terms of the hybrid analysis proposed here. First, agreement on *laysa* is the result of  $\phi$ -feature valuation with the subject DP. Second, the exclusive occurrence of this negation particle with present tense contexts is due to its composite form, which includes a present tense lexical copula. Third, lack of adjacency between *laysa* and the verb is the result of Neg being hosted by the lexical copula, thereby preventing the verb from moving all the way up to Neg, raising instead only to Asp, hence showing  $\phi$ -agreement as well.

### 5.5.3 Deriving the non-inflecting negative in SA: the case of *maa*

The last negation particle in the SA negation paradigm is *maa*. Recall that *maa* inflects neither for tense nor agreement, is compatible with all verb forms, and does not require adjacency with the verb. Here are the earlier illustrative examples:

- (37) a. maa    qraʔa                      Zayd-un        ʔal-kitaab-a  
              Neg    read 3sgmas    Zayd-NOM    the-book-ACC  
              “Zayd did not read the book.”

- |    |     |                                   |          |                 |
|----|-----|-----------------------------------|----------|-----------------|
| b. | maa | yu-ħibb-u                         | Zayd-un  | ʔal-qiraaʔat-a  |
|    | Neg | IMPER-love 3sgmas-IND             | Zayd-NOM | the-reading-ACC |
|    |     | “Zayd does not like reading.”     |          |                 |
|    |     |                                   |          |                 |
| c. | maa | sa-yu-safir-u                     | Zayd-un  | ʔad-an          |
|    | Neg | FUT-IMPER-love 3sgmas-IND         | Zayd-NOM | tomorrow-ACC    |
|    |     | “Zayd is not traveling tomorrow.” |          |                 |

To account for the behavior of *maa*, it is reasonable to assume that it has no uninterpretable features and hence does not take part in any Agree relation. If so, then we should expect it to be compatible with all verb forms (past, present, and future), given that the tense feature will remain on T and then appears on V when the verb raises. This also explains why no adjacency effect is observed with *maa*, under the assumption that Neg is only affixal when hosting formal features (see fn. 7).

### 5.5.4 Summary

In this section I have shown that the morphosyntactic properties of the negation paradigm in SA can be accounted for in terms of a hybrid analysis, whereby some head-head relations (particularly those between functional heads) are driven by the need to license formal features such as tense and  $\phi$ -features on Neg, whereas movement of lexical verbs to host affixal heads is done in the morphological component. The analysis has the virtue of accounting for the three types of negative sentences in the language: tensed negatives,  $\phi$ -agreeing negatives, and non-inflecting negatives. If correct, the analysis presents further evidence that something like Agree does exist in the grammar as a mechanism for formal feature licensing, not only between functional heads and substantive categories, but also in a subset of the head-

head relations that have been typically treated as cases of head movement, specifically those holding between functional heads. In the next section, I show that there is further empirical evidence that this proposal is correct.

## **5.6 Some consequences of the “hybrid” analysis of SA inflecting negatives**

In this section, I discuss both the theoretical and empirical advantages of the hybrid analysis of the negation paradigm in SA.

### **5.6.1 Theoretical consequences: No HM-related issues**

Since the proposed analysis does not involve any “actual” head movement in the syntax, but only feature valuation, the theoretical problems discussed in Section 1 with regard to HM disappear. For one thing, if chain uniformity indeed holds as a principle of grammar, there is no violation of uniformity here because there is no movement, hence no chain. Similarly, if the extension condition does hold for adjunction, the current proposal is compatible with that, since Agree does not create an adjunction structure. Finally, and perhaps most importantly, the operation is “minimalist” since it is driven by the requirement to check the formal features of functional heads.

### **5.6.2 Empirical consequences**

#### **5.6.2.1 Negation in “verbless” sentences**

One prediction that the current analysis makes is that only Neg heads that do not require verb raising, i.e., *laysa* and *maa*, will be compatible with the so-called “verbless” copular constructions. This is because Neg in such cases is nonaffixal and therefore does not need a verb to host it, which is the case of *maa*, or because the Neg

head can be already hosted by a lexical T, which is the case of the composite form *laysa*. Tensed Neg, being affixal, as in the case of *laa*, is, by contrast, predicted to be incompatible with verbless sentences. The predictions are borne out: *maa* and *laysa* can negate verbless sentences; *laa* cannot:

- (38) a.    *maa*    *Zayd-un*        *fii-ʔal-dar-i*  
              Neg    *Zayd-NOM*    in-the-house-GEN  
              “Zayd is not in the house.”
- b.    *laysa*                *Zayd-un*        *fii-ʔal-dar-i*  
              Neg 3sgmas    *Zayd-NOM*    in-the-house-GEN  
              “Zayd is not in the house.”
- c.    \**laa/lam/lan*    *Zayd-un*        *fii-ʔal-dar-i*  
              Neg                *Zayd-NOM*    in-the-house-GEN

#### 5.6.2.2 Interaction between C, Neg, and T

Another prediction made by the current proposal is that other functional heads should, in principle, be expected to engage in Agree relations like Neg does. I would like to argue here that C in SA may also appear with an uninterpretable tense feature, hence requiring valuation through Agree (see Pestesky and Torrego (2001) who argue that C has a [uT] feature). Evidence for this comes from the complementizer system in the language. As Aoun (1981) discusses, there are two types of embedded Cs in SA: *ʔanna* and *ʔan*. The behavior of the two Cs differs, however. While *ʔanna* is compatible with all verb forms in the embedded clause, *ʔan*, by contrast, can only occur with non-tensed imperfective verb forms:

- (39) a.     $\text{\textcircled{D}anan-tu}$      $\text{\textcircled{?}anna}$     Hind-a    kataba-t     $\text{\textcircled{?}al-risaalat-a}$   
          thought-1sg    C    Hind-ACC    wrote 3sgfem    the-letter-ACC  
          “I thought that Hind wrote the letter.”
- b.     $\text{\textcircled{D}anan-tu}$      $\text{\textcircled{?}anna}$     Hind-a    ta-ktub-u     $\text{\textcircled{?}al-risaalat-a}$   
          thought-1sg    C    Hind-ACC    IMPER-write 3sgfem-IND    the-letter-ACC  
          “I thought that Hind is writing the letter.”
- c.     $\text{\textcircled{D}anan-tu}$      $\text{\textcircled{?}anna}$     Hind-a    sa-ta-ktub-u  
          thought-1sg    C    Hind-ACC    FUT-IMPER-write 3sgfem-IND  
          r-risaalat-a  
          the-letter-ACC  
          “I thought that Hind will write the letter.”
- (40) a.     $\text{\textcircled{?}araad-a}$     Zayd-un     $\text{\textcircled{?}an}$     ya-rħal-a     $\text{\textcircled{?}amr-u}$   
          wanted 3sgmas    Zayd-NOM    C    IMPER-leave 3sgmas-SUB    Amr-NOM  
          “Zayd wanted Amr to leave.”
- b.    \* $\text{\textcircled{?}araad-a}$     Zayd-un     $\text{\textcircled{?}an}$     raħal-a     $\text{\textcircled{?}amr-u}$   
          wanted 3sgmas    Zayd-NOM    C    left 3sgmas    Amr-NOM
- c.    \* $\text{\textcircled{?}araad-a}$     Zayd-un     $\text{\textcircled{?}an}$     sa-ya-rħal-a  
          wanted 3sgmas    Zayd-NOM    C    FUT-IMPER-leave 3sgmas-SUB  
           $\text{\textcircled{?}amr-u}$   
          Amr-NOM

Second, while *\text{\textcircled{?}anna}* does not require adjacency with the verb, *\text{\textcircled{?}an}*, by contrast, does require adjacency with the verb. The sentences in (40b-c) above show lack of adjacency between *\text{\textcircled{?}anna}* and the embedded verb, while the following data show the ungrammaticality of *\text{\textcircled{?}an}* in absence of adjacency with a verb:

- (41) a. \*ʔaraad-a      Zayd-un      ʔan   ʔamr-u      ya-rħal-a  
                  wanted 3sgmas   Zayd-NOM   C      Amr-NOM   IMPER-leave 3sgmas-SUB  
                  “Zayd wanted Amr to leave.”
- b. \*ʔaraad-a      Zayd-un      ʔan   ʔadan      ya-rħal-a  
                  wanted 3sgmas   Zayd-NOM   C      tomorrow   IMPER-leave 3sgmas-SUB  
                  ʔamr-u  
                  Amr-NOM  
                  “Zayd wanted Amr to leave.”

The contrasting behavior of *ʔanna* and *ʔan* seems to parallel that of the tensed negation particle *laa* as opposed to the non-tensed *maa*. One may speculate, then, that the difference between the two types of C is also tense realization: *ʔanna* does not realize the tense of the embedded clause, while *ʔan* carries the tense feature of the embedded clause. As it turns out, there is good evidence that this is true from the interaction of negation with both types of C. While *ʔanna* can co-occur with all forms of tensed negation (i.e., *laa*, *lam*, *lan*), *ʔan*, by contrast, can only occur with *laa*, the default form. Compare (42) and (43):

- (42) a. ǧanan-tu      ʔanna   Hind-a      lam   ta-ktub-Ø  
                  thought-1sg      C      Hind-ACC   Neg   IMPERF-write 3sgfem-JUS  
                  ʔal-risaalat-a  
                  the-letter-ACC  
                  “I thought that Hind did not write the letter.”

- b.    ǧanan-tu            ʔanna   Hind-a        laa    ta-ktub-u  
           thought-1sg    C        Hind-ACC   Neg   IMPERF-write 3sgfem-IND  
           ʔal-risaalat-a  
           the-letter-ACC  
           “I thought that Hind is not writing the letter.”
- c.    ǧanan-tu        ʔanna   Hind-a        lan    ta-ktub-a  
           thought-1sg   C        Hind-ACC   Neg   IMPERF-write 3sgfem-SUB  
           ʔal-risaalat-a  
           the-letter-ACC  
           “I thought that Hind did not write the letter.”
- (43) a.   ʔaraad-a            Zayd-un        ʔalla (=ʔan+laa)   ya-rħal-a  
           wanted 3sgmas   Zayd-NOM   C+Neg<sub>Present</sub>        IMPER-leave 3sgmas-SUB  
           ʔamr-u  
           Amr-NOM
- b.    \*ʔaraad-a            Zayd-un        ʔallam (=ʔan+lām)   ya-rħal-a  
           wanted 3sgmas   Zayd-NOM   C+Neg<sub>Past</sub>                IMPER-leave 3sgmas-SUB  
           ʔamr-u  
           Amr-NOM
- c.    \*ʔaraad-a            Zayd-un        ʔallan (=ʔan+lan)   ya-rħal-a  
           wanted 3sgmas   Zayd-NOM   C+Neg<sub>Future</sub>        IMPER-leave 3sgmas-SUB  
           ʔamr-u  
           Amr-NOM  
           “Zayd wanted Amr to leave.”

The contrast between (42) and (43) can be accounted for if we assume that *ʔan* is the result of C absorbing the tense feature of the embedded clause. Specifically, Neg Agrees with T in tense, followed by C Agreeing with Neg in tense as well. By

Condition R, the tense feature has to be realized on the highest head, which is C in this case, therefore explaining the absence of tense-inflecting negation particles with this complementizer, as well as the required adjacency between C and the verb. The complementizer system in SA thus provides support for the hybrid analysis of head movement, whereby relations between functional heads can be licensed via minimalist mechanisms of formal feature licensing, Agree in the present context.

### 5.6.2.3 Further evidence from the morphosyntax of SA imperatives

In this section I provide further evidence for the Agree-based approach to interactions between functional heads from the behavior of positive and negative imperatives in SA.

It has been noted in the literature on SA grammar (Wright 1898, Benmamoun 2000) that the prefix in an imperfective form represents person agreement (and occasionally gender), whereas the suffix stands for number agreement. At least for second person forms that seems to be true: all the second person imperfective forms in (44) start with *ta-*.<sup>10</sup> Now, given this, let's compare the second person imperfective forms to verb forms in positive and negative imperative contexts:<sup>11</sup>

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<sup>10</sup> Similarly, all third person forms, with the exception of the singular feminine form, start with *ya-*, the exception is probably to mark gender distinction between the masculine and feminine third person singular forms, given the absence of any suffix on such forms. The same may be said about the prefix in first person forms, where the absence of any suffix on the verb form may also be the reason why the prefix signals number in addition to person, gender being irrelevant for first person forms in this language.

<sup>11</sup> Imperative verbs appear in the so-called jussive mood (or temporal case in Fassi Fehri's terminology).



(44)	Imperfective	Positive Imperative	Negative Imperative
2sgmas	ta-ktub-u	?u-ktub-Ø	laa ta-ktub-Ø
2sgfem	ta-ktub-ii-na	?u-ktub-ii	laa ta-ktub-ii
2dumas/fem	ta-ktub-aa-ni	?u-ktub-aa	laa ta-ktub-aa
2plmas	ta-ktub-uu-na	?u-ktub-uu	laa ta-ktub-uu
2plfem	ta-ktub-na	?u-ktub-na	laa ta-ktub-na
	“write”	“Write.”	“Don’t write.”

Ignoring both the initial epenthetic glottal stop in the positive imperative forms and the indicative *-na/ni* endings of the imperfective forms, one can notice that the positive imperative forms are actually the imperfective forms minus the second person prefix *ta-*: They have the same vocalic melody and the same number and gender suffixes. The negative imperative forms, however, are exactly identical to the imperfective forms in having the second person prefix, again ignoring the mood-marking inflectional endings. In short, then, while positive imperatives do not show person agreement, negative imperatives do.

But then the question that immediately arises is why person agreement shows in negative imperatives but not in positive imperatives. Benmamoun (2000) suggests an answer to that question cast within a minimalist system of categorial feature checking of functional heads. For him, in positive imperatives, the head carrying the Imp(erative) feature is T, which is specified for a [+V] feature only, but no [+D] feature. Since person agreement, according to Benmamoun, is what checks the [+D] feature of T, absence of person agreement in positive imperatives follows from absence of that [+D] feature. In negative imperatives, by contrast, while imperative T still has the same categorial feature specification as in positive imperatives (i.e., [+V]

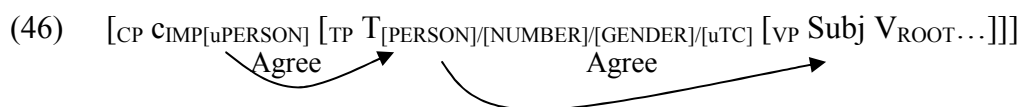
only), it is the introduction of the Neg head that now requires person agreement, under the assumption that Neg is always [+D]. As it turns out, however, SA has a second paradigm of positive imperatives: the *li*-imperatives, which are introduced by the particle *li*-. The paradigm is given below:

(45) Positive *li*-imperative forms for the verb *ktb*:

2sgmas	li-ta-ktub-Ø
2sgfem	li-ta-ktub-ii
2dumas/fem	li-ta-ktub-aa
2plmas	li-ta-ktub-uu
2plfem	li-ta-ktub-una
“Write.”	

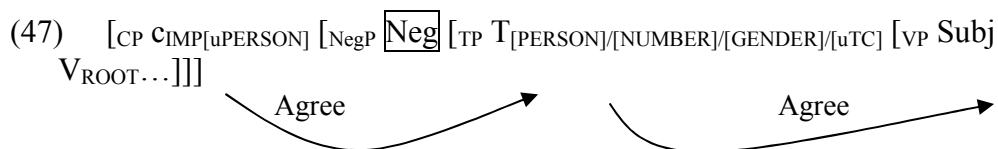
While the verb forms in (45) are positive imperatives in the same way the forms in (44) are, they, however, resemble the negative imperative forms in (44), in that the verb shows person agreement. If this is the case, then the presence of negation has nothing to do with whether or not the imperative verb shows person agreement. The difference must lie somewhere else.

In what follows, I would like to suggest that the absence of person agreement on imperative forms is due to imperative C absorbing that person feature under Agree with T. More precisely, the structural presentation of a positive imperative is as in (46), ignoring irrelevant details as usual:



The CP is headed by an imperative C<sub>IMP</sub>, familiar from work on imperatives (see Lasnik 1981; Beukma and Coopmans 1989; Pollock 1989, Benmamoun 2000; among many others). Assume that C<sub>IMP</sub> has an uninterpretable Person feature.<sup>12</sup> T Agrees with Subj in the usual fashion, licensing the  $\phi$ -features on T. Now, C Agrees with T in Person, thereby licensing C's Person feature as well as the temporal case on T, as evidenced by the occurrence of the jussive mood marker on imperative verb forms (cf. fn. 11). Since T is the head of the sister of C, then, by Condition R, the Person feature has to be realized on the probing head, C in this case, which explains its absence on the verb.

By contrast, the obligatory presence of person agreement in negative imperatives is due to the presence of the Neg head between C and T. While Agree between C and T in Person can still take place (Neg being a non-intervener for lacking the relevant feature)<sup>13</sup>, Condition R will force Person to be realized on T, since T, due to the presence of Neg in the structure, is now not the head of the sister of C. A structural representation with Agree relations is shown in (47):



Given the structural representation in (47), we predict that Person has to be realized on T, as desired. Notice also that the Agree relation results in licensing the temporal

<sup>12</sup> Whether this can be tied to the fact that imperative structures are for the most part second person in nature is unclear. Perhaps the inherent properties of imperative C is compatible with it being the locus of the formal feature of (second) person, but this is at best a mere speculation.

<sup>13</sup> A question that might arise here is why Neg does not cause a defective intervention effect blocking Agree between C and T. I'm assuming here that Neg does not have a Person feature, hence is not a potential Goal.

case feature of T, which has the morphological reflex of jussive mood-marking in the language.

On the other hand, the analysis provided above can now be extended to the second type of positive imperatives in SA: *li*-imperatives, as in (45). If *li*- is a modality head of some sort, then it will have the same effect as Neg in negative imperatives, blocking the Person feature from appearing on C, hence its obligatory appearance on the verb.

## **5.7 Summary**

To sum up, the hybrid analysis of head movement presented in this chapter not only accounts for the rather complex behavior of SA negation particles, but can also provide an explanation for a few other morphosyntactic phenomena. Among these are negation in verbless sentences, interaction between the tensed negation marker *laa* and embedded Cs, as well as the presence of person agreement on negative imperative forms as opposed to its absence in positive imperatives. If correct, this analysis provides further support for Agree as a mechanism for formal feature licensing, not just between heads and substantive categories, but also between functional heads themselves.

## **5.8 Cross-linguistic implications**

This incompatibility between negation and imperative forms has been noted in several languages in the literature on the syntax of imperatives (see, for example, Joseph and Philippaki Warbuton 1987 for Modern Greek; Zanuttini 1991, 1994, 1997 for Romance; Rivero 1994a, 1994b, and Rivero and Terzi 1995, for

Slavic/Balkan). To illustrate, consider the following examples from Modern Greek and Spanish (data from Han 1999), where negative imperatives are ungrammatical, with prohibition expressed instead through the use of so-called “suppletive” imperatives where the verb surfaces in the subjunctive or infinitival form:

- (48) a. \*Mi   grapse           to!           Modern Greek  
          neg   write-2sg.Imp   it  
          ‘Don’t write it!’
- b. (Na)   mi   to   grapsis!  
          NA   neg   it   write-2sg.Subj  
          ‘Don’t write it!’

- (49) a. \*No   lee!                           Spanish  
          neg   read-2sg.Imp  
          ‘Don’t read!’
- b. No   leas!  
          neg   read-2sg.Subj  
          ‘Don’t read!’
- c. No   leer!  
          neg   read-Inf  
          ‘Don’t read!’

By contrast, several other languages do allow negation of imperative forms of the verb. Consider the following data from French, German, Bulgarian and Serbo-Croatian:

- (50) a. Chantez!                           French  
          Sing.2pl.Imp  
          “Sing!”

- b. Ne Chantez pas!  
 Neg Sing.2pl.Imp Neg  
 ‘Don’t sing!’

- (51) a. Schreibt!  
 write.2pl.Imp  
 “Write!”

- b. Schreibt! nicht!  
 write.2pl.Imp Neg  
 “Don’t write!”

- (52) a. Četi!  
 read-2sg.Imp  
 “Read!”

- b. Ne četi!  
 neg read-2sg.Imp  
 “Don’t read!”

- (53) a. Čitaj!  
 read-2sg.Imp  
 “Read!”

- b. Ne čitaj!  
 neg read-2sg.Imp  
 “Don’t read!”

Obviously, the main question is what kind of parameterization is responsible for this cross-linguistic divergence in the compatibility between imperatives and negation. In what follows I extend the analysis developed earlier for SA to account for this case of cross-linguistic variation.

In the discussion of SA negation structures early in this chapter, I assumed that Neg is higher than T. In many treatments of negation in other languages, however, Neg is taken to mark the boundary of VP (or  $v^*P$ ), hence is located lower than TP. Significantly, in these languages, unlike in SA, the negation morpheme is actually postverbal, not preverbal, as the case is in Icelandic, for instance, as shown in (54):

- (54)        Nemandinn    las       ekki    bókina  
              student-the    read    not    book-the  
              “The student didn’t read the book.”

I will assume therefore that the position of negation is parametric (cf. Laka 1990; Zanuttini 1997), induced probably by the selectional property of the Neg head in the language: selecting either VP or TP. If this is the case, then we have a straightforward explanation for why languages like German and French allow negative imperatives: the Neg head is low enough to allow a syntactic relationship between C and T to take place. Now, whether imperative C in these languages also realizes a Person feature or some other feature is not really crucial. It is hard to find morphological evidence from the conjugation paradigm of verbs in these languages that imperative forms are actually lacking person agreement. What is crucial, however, is that imperative C has a specific feature that neither declarative nor interrogative C has, and that this feature is licensed through Agree with T. In positive imperatives this is straightforward: C and T can Agree with each other directly. Importantly, though, unlike in SA, in negative imperatives the same configuration holds, since Neg is below T rather than above it, thereby allowing the same C-T feature licensing to take place.

The problem that immediately arises with this analysis is that both Bulgarian and Serbo-Croatian have preverbal negation, but both still allow negative imperatives (cf. the data in (52-53). Why is it that Neg in these languages does not block Agree between C and T, then? Rivero and Terzi (1995) argue that the imperative feature in imperative structures is actually located in T, rather than C, in Slavic languages. In support of this view, they point out that imperative verbs in these two languages cannot raise as high as C, since they may follow clitics in those structures where the clitic is not in initial position, as illustrated in (55) below:

- (55) a. Knjige im čitajte! Serbo-Croatian  
           books to-them read-2pl.Imp (Rivero and Terzi 1995)  
           “Read books to them!”
- b. Ela i mi kaži! Bulgarian  
           come-2sg.Imp and me tell-2sg.Imp (Hauge 1976; cf. Rivero 1994)  
           “Come and tell me!”

If clitics are adjoined to some functional head above T, as suggested in Kayne (1994) for example, then it cannot be that the imperative verb in (55) is located in C. It must be then that in these structures the verb does not raise higher than T. If this analysis is correct, then the parametric option characterizing these two Slavic languages has to do with the locus of the Imp feature. But notice that if Imp is actually located in T, then it does not matter now if Neg is higher or lower than T, since C becomes irrelevant for the syntax of imperatives, and the presence of Neg will not disrupt any C-T feature licensing since such licensing is simply not needed in these languages.

This analysis cannot be the whole story, however. Both Bulgarian and Serbo-Croatian do have imperative structures where the clitic appears postverbally:



- (56) a. Četi! ja! Bulgarian  
 read-2sg.Imp it  
 “Read it!”
- b. Čitaj! je! Serbo-Croatian  
 read-2sg.Imp it  
 “Read it!”

The postverbal position of the clitic in the sentences in (56) seems to contradict our conclusion above that V never raises higher than T in imperative structures in these two languages, since it seems that the verb is actually located in a position higher than the clitic. In her discussion of this problem, Han (1999) cites Embick and Izvorski’s analysis of Slavic examples with auxiliaries like the one in (57) below:

- (57) Napísal som list Slovak  
 written am letter (Embick and Izvorski 1997)  
 “I have written a letter.”

To account for the fact that the auxiliary in these constructions has to follow the main verb, Embick and Izvorski argue, following Marantz (1989), that this is the result of a postsyntactic morphological merger operation whereby the positions of the lexical verb and the auxiliary clitic are switched to avoid violation of the ban on clitic-initial structures in Slavic languages. If their analysis is correct, then the data in (56) are still compatible with an analysis whereby the imperative verb does not raise higher than T, with the surface V-Clitic order being the result of a postsyntactic operation.

To summarize, in this section I discussed some cross-linguistic implications for the analysis of negative imperatives that I offered for SA. There are a number of languages where negative imperatives do not occur. Rather, the verb will appear in some other suppletive form. I argued that this is precisely for the same reason person

agreement in SA is forced to appear on the negative imperative verb: C can Agree with T, but cannot realize/absorb its Person feature. In languages without negative imperatives, we can extend the same analysis arguing that Neg disrupts the appearance of whatever formal feature imperative C has, therefore forcing the verb to appear in a non-imperative form, e.g., subjunctive or infinitive (on par with the imperfective in SA). On the other hand, languages that do allow negative imperatives are of two types: Those that have postverbal negation, in which Neg is never in a position to disrupt the realization of the relevant feature on C (French, German); and those that have the relevant imperative feature located in T rather than C (Slavic), thereby rendering the C-T feature licensing process otiose.

## **5.9 Chapter summary**

In this chapter, I discussed the interesting (and rather complex) negation paradigm in SA, arguing for a hybrid analysis in terms of Agree between the two functional heads T and Neg, coupled with morphophonological movement of the lexical verb. I have shown that this analysis derives the three different types of negation, as well as their associated properties. I have also shown that the analysis escapes all the theoretical problems associated with syntactic head movement, while also accounting for a set of interesting empirical facts regarding negation in verbless sentences, interaction between negation and C in embedded clauses, as well as the agreement properties of positive and negative imperatives. In particular, I argued that imperatives involve an Agree relation between T and C, whose morphological reflex is absorption of Person agreement from the verb. meanwhile, the presence of a negation or modality head between C and T, while still allowing the Agree relation to take place, will prevent

the person feature from appearing on C (by Condition R), therefore forcing Person to appear on the verb, instead. Finally, I have explored the cross-linguistic implications of the analysis, showing that other languages do exhibit the same pattern in negative imperatives. Cross-linguistic variation in this regard follows from the parametric options for the position of Neg in clause structure, as well as the location of the relevant feature in imperative structures. If the proposal made in this chapter is correct, it further supports that an operation like Agree is indeed a primitive of the grammar.

## Chapter 6

### Conclusions, implications, and further extensions

In this chapter, I first summarize the theoretical and empirical conclusions of the present thesis, then discuss some of the implications and questions that the proposed analyses raise for the minimalist program, and, finally, mention some routes of research that I would like to explore in future research in light of the proposals made in this thesis.

#### 6.1 Conclusions

The goal of this thesis has been to examine formal feature licensing mechanisms in minimalist syntax through the investigation of a set of phenomena in Standard Arabic (SA) at the syntax-morphology interface. I have argued that Agree, as a mechanism for licensing formal features, accounts for the relevant empirical facts, and has the potential of extending to other aspects of SA morphosyntax such as those observed in the negation and imperative paradigms.

In particular, in Chapter 2, I have argued that the classical subject-verb agreement asymmetry is only apparent: Surface full agreement is actually agreement with a  $v^*P$ -internal *pro* subject, whereas partial agreement is due to a default agreement option in the language for  $\phi$ -feature valuation, though not for CLASS features. The analysis is supported by empirical evidence regarding the semantics of each word order, interaction with wh-extraction, Case properties of pre- and postverbal DPs, idiom chunks, occurrence of overt resumptive pronouns, as well as islands, all of which indicate that the preverbal DP in SV structures is actually base-

generated in its surface position in a left dislocation (LD) structure rather than arriving there via movement. I have also proposed to extend the analysis to account for cases of first conjunct agreement (FCA), arguing that FCA follows if adjunct ConjPs are allowed to be introduced postcyclically in the thematic domain, thereby giving rise to Agree with only the first conjunct.

In Chapters 3 and 4, I argued that the LD analysis proposed in Chapter 2 gains further support from the examination of other constructions in the language, concluding that SA is a language that does not utilize A-movement operations altogether.

In particular, in Chapter 3, I have provided empirical evidence that an A-movement analysis of passives in SA is untenable, given that the internal argument of a passive verb agrees with the verb and gets Case-assigned in situ. Passive sentences in which a preverbal DP occurs have also been shown to be cases of base-generated LD, on par with all SV structures in the language in general, as argued throughout this thesis. Raising predicates, on the other hand, select a finite CP, thereby indicating the implausibility of a movement analysis, under minimalist assumptions of ‘case freezing’ effects and phase impenetrability. Empirical evidence also shows that the preverbal DP in a raising construction can be associated with a resumptive pronoun inside islands, thereby indicating that it cannot have arrived at its surface position via movement.

I have also shown that in raising constructions, where Agree cannot take place due to the opacity of its domain, default agreement will always be manifest on the verb, regardless of whether or not there is a preverbal DP in the matrix clause. The

same obligatory default agreement arises in cases of P-passives, where the Theme argument is a PP, another case of opacity, this time induced by (lexical) Case being assigned internal to the PP. I have also shown that in those opacity contexts where a potential target for Agree is available, Agree does take place resulting in  $\phi$ -agreement on the verb and case-assignment on the target, which is the case in constructions with verbs of deontic modality and possessive/locative predicates.

I have also discussed the phenomenon of Object Shift (OS) in SA, indicating both the similarities and differences between OS in SA and OS in Icelandic-type languages. Raising the question of the status of OS as an A- or A'-movement, I concluded that the standard tests for the A-A' distinction suggest that OS in SA is not an instance of A-movement, though, admittedly, the evidence is inconclusive. Facts from intervention effects with topicalization and wh-extraction in double object constructions indicates that the movement involved is indeed an instance of A'-movement, thereby confirming the hypothesis defended in this thesis that SA does not have A-movement operations.

In Chapter 4, I have discussed what are often called raising-to-object (RTO) constructions, arguing that they are the result of base-generation rather than raising. While all the structures are assumed not to involve movement, they differ with regard to where the accusative DP is base-generated and the type of category that functions as a complement for each. In *Paraada*-type RTO constructions, the accusative DP is argued to occupy a thematic position in the matrix clause, where it is assigned a  $\theta$ -role by the matrix verb and accusative case by the functional head  $v^*$ . This rich structure gives rise to interpretive effects, comparable to those found in sentences that

have a PP carrying the same  $\theta$ -role. The accusative DP, meanwhile, is linked to a resumptive pronoun, null in the case of subjects, overt in the case of nonsubjects.

*ǰanna*-type RTO constructions are, however, argued to base-generate the accusative DP at the left periphery of the embedded clause. Taking the absence of an overt C to indicate the absence of the CP boundary, the peripheral accusative DP can now be accessible for Agree with matrix  $v^*$ , under standard assumptions of phase-based syntax. I have also shown that the impossibility of postverbal positioning of the DP follows from the inability of  $v^*$  to engage into any Agree relation to license its formal features, hence causing the derivation to crash. When an overt C or a nonsubject DP occupies the peripheral position of the embedded clause, occurrence of a postverbal subject becomes possible.

Similarly, RTO constructions with perception verbs are argued to have the same embedded clause structure of *ǰanna*-type constructions, except that they are headed by a non-tensed T, hence their tense-dependence on matrix T. Despite non-tensedness, embedded T is still  $\phi$ -active and is able to Agree and assign nominative case to a postverbal subject, if another DP occupies a peripheral position in the embedded clause for matrix  $v^*$  to Agree with.

All in all, the RTO constructions discussed here show that SA is a language that does not seem to use A-movement operations. Rather, displaced DPs are base-generated in their surface position, while being linked to pronominals in the thematic domain.

Finally, in Chapter 5, I discussed the intricate negation paradigm in SA, arguing for a hybrid analysis in terms of Agree between the two functional heads T and Neg, coupled with morphophonological movement of the lexical verb. I have shown that this analysis derives the three different types of negation, as well as their associated properties. I have also shown that the analysis escapes the theoretical problems that have been noted with regard to syntactic head movement, while also accounting for a set of interesting empirical facts regarding negation in verbless sentences, interaction between negation and C in embedded clauses, as well as the agreement properties of positive and negative imperatives. In particular, I argued that imperatives involve an Agree relation between C and T, whose morphological reflex is absorption of Person agreement from the verb. Meanwhile, the presence of a negation or modality head between C and T, while still allowing the Agree relation to take place, prevents the person feature from appearing on C (by the so-called Condition R), therefore forcing Person to appear on the verb, instead.

Finally, I have explored the cross-linguistic implications of the analysis for the morphosyntax of imperatives, showing that other languages do exhibit the same pattern in negative imperatives. Cross-linguistic variation in this regard follows from the parametric options for the position of Neg in clause structure, as well as the location of the relevant feature in imperative structures. If the proposal made in this chapter is correct, it further supports that an operation like Agree is indeed a primitive of the grammar.

To sum up, the analysis proposed here for these aspects of SA morphosyntax provides further evidence for a theory of grammar in which agreement is induced



between syntactic elements in terms of a primitive built-in mechanism, Agree, specifically designed to do so. The facts also show that movement and formal feature licensing do not have to coincide, which is compatible with the Agree-based approach. Equally important is that this approach has the potential of extending to account for formal feature licensing between heads in the functional domain, therefore avoiding the typical problems associated with a syntactic head movement account.

## **6.2 On some implications for minimalist syntax**

In this section I would like to explore some of the implications or questions that the current work raises for a theory of minimalist syntax.

One of the main themes of this thesis has been the status of A-movement. I have argued that SA does not make use of A-movement in constructions that typically exhibit A-movement in other languages. Rather, empirical facts indicate that lexical DPs are base-generated in their surface position at the periphery of the clause and linked to resumptive pronouns in the thematic domain. If correct, such an approach is more in line with the earlier minimalist assumption that movement is not a free operation, but a last resort driven by the need to license formal features. If such formal licensing can be fulfilled without recourse to movement, then movement should not apply. Under this approach, we predict the presence of languages where A-movement is completely lacking, as I argued here for SA. More recently, however, Chomsky (2001a, 2001b) has proposed that movement actually comes “free of charge.” If that approach is correct, then it would be a bit surprising if A-movement is

absent in a particular language or languages.<sup>1</sup> As should be clear by now, the results of this thesis are more in conformity with the earlier approach to movement than the later approach. The results are also compatible with the observed gradation in the licensing of A-movement in natural languages, as mentioned earlier with reference to Uriagereka's 2006 discussion of the A-movement continuum in a range of languages. While I have not discussed this continuum in any detail, it is one topic that deserves pursuing further in future research (see Grebenyova, Soltan and Uriagereka (in progress) for an attempt in this direction).

On the other hand, if minimalism is anchored in the intuition that “less is more,” as Epstein and Hornstein (1999) state, a question arises with regard to the base-generation analysis of clause structures in SA proposed in Chapters 2-4: How “minimalist” is such an analysis? For one thing, in addition to the operations Merge and Agree, the analysis also crucially requires an operation, let's call it *Bind*, that establishes coreference between the LD-DP at the periphery of the clause and the associated resumptive pronoun in the thematic domain. Under a movement analysis, such an operation is not needed, since the relationship between the peripheral DP and the thematic position is a consequence of the inherent property of movement operations. I have assumed all along that Bind exists, without discussing how it operates or what it follows from. In his discussion of resumption, McCloskey (non-dated) argues that the base-generation analysis of resumption comprises what seems like a “consensus” view. It is not clear, however, how Bind fits within a minimalist

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<sup>1</sup> One may still be able to reconcile the present analysis with the claim that movement is a free operation, under the assumption that this “freeness” gets overridden by some parametric setting. In the cases discussed here, that would be whatever parameter is responsible for resumption. It remains, however, to determine what kind of parameter that is (but see the following paragraph for a hypothesis regarding the nature of resumption in languages like SA).

framework. Since I have argued throughout the thesis for a non-movement analysis of clause structure in SA, I cannot adopt a movement theory of resumption, along the lines suggested for example in Aoun *et al* (2001) and Boeckx (2003a). One possible alternative, made available in a cyclic theory of syntax like the one adopted here, is to treat resumption still as a derivational “residue,” though not of movement, but of cyclic Spell-out.

In particular, suppose that in languages like SA that makes extensive use of resumption, lexical DPs can be Spelled-out in a separate derivational cascade, to use Uriagereka’s (1999) term (cf. the discussion of multiple Spell-out in Chapter 1), and that such an operation creates a “head copy” of the Spelled-out DP, i.e., a D with the same set of  $\phi$ -features as that DP. This D head may now enter the derivation and Merge in the thematic domain of the structure. Later in the derivation, when the Spelled-out DP enters the derivation as a LD-ed element, it will be interpreted as coreferential with the D head in the thematic domain, by virtue of the derivational history of that head. Under this approach, resumptive pronouns are still treated as grammatical formatives, as the case is under a movement theory of resumption. On the other hand, the phonological content of a resumptive pronoun or lack thereof will be tied to whether the pronoun’s  $\phi$ -features are recoverable from another element in the structure. This should explain to us why subject resumptive pronouns in SA, for example, are typically null, whereas resumptive pronouns in other positions have to be overt. If this analysis proves tenable, then resumption, as Boeckx (2003a) argues, is the result of “stranding” D, though under the hypothesis outlined above, such stranding is not due to movement, but is the result of cyclic Spell-out. If such an

analysis of resumption can be maintained, it would allow us to dispense with the operation Bind, since the association between the LD-ed DP and the resumptive pronoun is now established derivationally, a welcome result within minimalist syntax.

Another question arises with regard to what I have referred to as Condition R in Chapter 5 of this thesis. Recall that Condition R regulates whether the valued features resulting from Agree are spelled-out on both the Probe and the Goal (as in  $\phi$ -agreement relations between heads and DPs), or on the Probe only (as in tense-inflection on Neg or C). The obvious question is whether this can be made to follow from anything in the theory of grammar. I have already speculated on an answer to that in fn. 5 in Chapter 5. The key notion that seems relevant here is that of sisterhood. Agree is only subject to Condition R when it holds between a head H and the head of the sister of H. Sisterhood has been typically taken to be a prerequisite for conflation processes (see Hale and Keyser 2002). This shows that the presence of Condition R is empirically warranted. The question now, however, is why this should be the case. In this respect, I would like to suggest that sisterhood affects the phonological spell-out of valued features because it is a “too local” local configuration. The main idea is that of Grohmann’s (2000, 2003) *anti-locality hypothesis*, whereby syntactic operations are not allowed to be “too local,” where “too local” is defined as taking place within the same “domain,” e.g., thematic domain, agreement domain, or discourse domain. Grohmann further argues that should “too local” operations apply internal to one of these domains, the derivation would crash, unless at the interface levels the locality effect is rendered invisible. In the cases he considers, the relevant operation is movement, not Agree. Too local

movement could be still allowed under Grohmann's anti-locality if at the interface the moved XP and its copy are "distinctly" spelled-out. If this approach can be maintained, then Condition R may be nothing but an anti-locality effect: Agree between a head H and the head of the sister of H is too local, therefore forcing a case of "distinct spell-out" of the features of both heads. In the cases discussed here, the distinctness is achieved via spelling-out the features on only one of the two heads (the Probe, to be exact), but not on them both. If this line of reasoning is correct, then the presence of something like Condition R in the grammar is both empirically and conceptually justified, in as far as the anti-locality hypothesis is tenable.

## **6.2 Further extensions for future research**

In this last section of this chapter, I would like to point out to a few areas of research that are natural extensions of the current work which I could not discuss in the present work for considerations of space and time, but which I would like to pursue in future research.

This thesis has been mainly concerned for the most part with case and agreement phenomena. A related phenomenon that I have not discussed at all is what is sometimes referred to as *concord*, i.e., agreement internal to DPs, as that between head nouns and their determiners and modifying adjectives. The main question here is whether concord is the same type of phenomenon as agreement or not, and whether it should be treated in terms of Agree, Spec-head relations, or in a completely different fashion. Since SA shows rich concord between head nouns and adjectives not only in  $\phi$ -features, but also in case-marking as well as definiteness, one item on my future

research agenda is to bring these data from SA to bear on the question of the status of concord in natural language grammar.

I have also said very little in this work on A'-dependencies in wh-questions. A natural extension of the current work is to examine if the current proposal can be extended to account for the morphosyntactic properties of the wh-construction paradigm in SA as well. The paradigm is interesting since the language allows wh-movement, forming questions and relative clauses with gaps, as well as wh-resumption, where a resumptive pronoun appears in what would be the extraction site of the wh-phrase. Interestingly, the gap strategy, as pointed out several times in the previous chapters, is considered a marked option, while the resumption strategy is the unmarked option. If anything, this suggests that even A'-movement is restricted in the language, thereby suggesting that movement is a marked option in the language in general. If this is the case, this would provide further evidence for the assumption adopted here that movement is a last resort, rather than a free operation.

Finally, the present thesis has been mainly confined to the study of morphosyntax in SA. A natural extension of the current study is to explore the implications of the analysis presented here for the modern Arabic dialects of today. The central question in this respect is: Do the modern dialects exhibit A-movement properties? How is this related to the fact that the SV order is the unmarked order in such dialects? If language change is induced via change in parametric settings (cf. Lightfoot 1999 and references cited there), what are the relevant parameters that distinguish SA from the modern dialects, and also distinguish the dialects from one another? As a native speaker of Egyptian Arabic, I would like to pursue these

questions and others in future research. In particular, I would like to study the effects of the loss of case morphology and attrition to the  $\phi$ -agreement paradigm on clause structure, word order, and the morphosyntax of this dialect in a micro-comparative study with other dialects.

While it ends here, this thesis is also a beginning.

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